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by

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Reducing Demand for Ivory in China:
A Qualitative & Quantitative Study

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**Reducing Demand for Ivory in China:
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Report

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Dedication

This report is dedicated to those committed to wildlife conservation around the world; from the park rangers who risk their lives to fight poaching to the activist dedicated to eliminating demand for wildlife products.

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Abstract

Reducing Demand for Ivory in China: A Qualitative & Quantitative Study

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Over the past decade, the world has seen a precipitous decline in elephant populations largely due to poaching spurred by resurgent demand, growing incomes in Asia, and enforcement shortfalls in elephant range states. Demand for ivory, though the subject of many studies and the target of numerous public awareness campaigns across Asia, remains poorly understood. Public education campaigns have had substantial success educating the public of the negative impacts of ivory consumption, but little is yet understood about which messaging works best to modify consumption behavior. The end goal of all these efforts is reducing ivory consumption, but how are policymakers to know which campaigns are truly effective and which may be counter productive? This study attempts to shed some light on this issue.

At the root of demand for ivory are a number of structural and normative problems. At the structural level, outdated laws and inconsistent policy implementation at the multiple levels of Chinese government make environmental campaigns difficult to implement. Issues of corruption, interference from private interests, and state-led

promotion of cultural heritage industries compound these problems. At the normative level, attitudes towards wildlife conservation and conscientious consumption are new in China. The determinants of demand, often rooted in deeply held personal beliefs, vary across demographic groups and between individuals. Campaigns must be designed with the Chinese consumers and their unique cultural values in mind and be targeted to individual subgroups in order to maximize efficacy. Shifting norms is a slow process and must also be bolstered by consistent government enforcement.

This report proceeds in three sections. The first introduces the global trade in ivory, what is known about demand for ivory in China and consumer groups, and what still remains to be discovered, which is the inspiration for this report. The second section discusses the structural obstacles to demand reduction, with a specific eye to the Chinese political and social context. It covers relevant domestic legislation, the role of civil society in forwarding conservation goals, and the efforts and successes thus far in the fight against ivory trafficking. Part three presents the results of an online experimental survey that tested how potential ivory consumers react to different conservation messaging and how that messaging modifies subsequent answers to questions about ivory consumption and incentivizes political action on conservation issues. The results of the survey show that receiving conservation-related messaging is effective in manipulating subjects responses to questions regarding attitudes towards ivory, both at the policy level and at the level of individual consumption behavior.

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I: Ivory Demand & the Illicit Trade

INTRODUCTION

In less than a decade, the global illicit trade in wildlife has become a \$19 billion USD a year industry, the fourth largest illegal trade on the planet.¹ Fueled by rising incomes and resurgent demand in Asia, this trade has caused populations of a number of culturally iconic and environmental important species to fall dramatically. The trafficking in elephant ivory is just one example of this transnational illicit sector that connects criminal networks, poachers, corrupt officials, and consumers around the world. Between 2007 and 2016, Africa lost an estimated 104,000 to 114,000 elephants largely due to a surge in poaching over the same period.² In the short span between 2007 and 2013, the amount of illegal ivory seized by law enforcement authorities increased more than six times.³ Two thirds of those large seizures occurred in demand countries in Asia.⁴ China, in particular, has persisted as the largest destination for illegal ivory in the world.⁵ Although the most recent data shows a slight decline poaching from a peak in 2011, it continues to be a grave threat to the future of African elephants.⁶

¹ Cheryl Lo & Gavin Edwards. *The Hard Truth: How Hong Kong's Ivory Trade is Fueling Africa's Elephant Poaching Crisis*. WWF. Hong Kong, 2015.

² C.R. Thouless, et al. *African Elephant Status Report 2016*. IUCN/SSC African Elephant Specialist Group, IUCN. Gland, Switzerland, 2016.

³ T. Milliken, et al. *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory, Traffic*, CITES CoP17 Doc. 57.6, 2016.

⁴ Tom Milliken. *Illegal Trade in Ivory and Rhino Horn: An Assessment to Improve Law Enforcement Under the Wildlife Traps Project*. USAID and Traffic. Cambridge, UK, 2014: 7.

⁵ T. Milliken, R. Burn, L. Sangalakula. *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A Report to the 15th Meeting of the Conference of the Parties to CITES*. Report for CITES CoP15 Doc.44.1. 2009.

⁶ CITES. "MIKE Report: Levels and Trends of Illegal Killing of Elephants in Africa to December 2016 – Preliminary Findings." CITES, Geneva, Switzerland. 3 March 2017.

China accounts for as much as 70% of the global ivory market, legal and illegal.⁷ Despite—or perhaps partly because of—China’s relatively positive law enforcement record, between 2012 and 2014 China averaged almost 2,000 seizures of raw and worked ivory, totaling more than 41,000 kilograms, alone surpassing the second highest group, which includes Kenya and Tanzania, the epicenter of the poaching crisis in Africa.⁸ Transnational organized crime networks and an increasingly militarized poaching force have supplied spiking demand for ivory among a growing Chinese middle class. Ivory outlets across China have effectively used legal stocks as cover to launder illegal ivory while a growing number of transactions are occurring online where enforcement is difficult. Problematic ivory registration and certification systems and insufficient law enforcement have compounded the problem. The Convention on the International Trade in Endangered Species (CITES) has proven largely ineffective at controlling domestic ivory markets, at times even exacerbating demand with one-off sales of ivory done at the behest of ivory supply and demand countries. A complete domestic market closure, set to take full effect in China at the end of 2017, signals unequivocally that ivory is no longer a legal commodity, but may drive more consumption underground and fuel demand in neighboring markets. Both demand and supply must be addressed simultaneously through a mixed strategy focusing on demand reduction campaigns that target present and potential consumers and effective law enforcement strategies to regulate the black market in Africa and Asia.

This first section of this report discusses in detail the macro and micro factors driving demand for elephant ivory, with a specific look at the Chinese market. The

⁷ Jeffrey Gettleman, “Closing China’s Ivory Market: Will It Save Elephants?” *The New York Times*, 31 December 31 2016. <https://www.nytimes.com/2016/12/31/world/africa/africa-ivory-china.html>.

⁸ T. Milliken et al., *The Elephant Trade Information System*: 13.

information presented is drawn from previous quantitative and qualitative research by NGOs and academics in China and elsewhere and serves as theoretical basis for the final section. The second section looks more closely at the structural obstacles that make market control and demand reduction difficult in China and how they can be overcome. This section focuses on the current state of the ivory trade, the legal and enforcement mechanisms used to counter wildlife trafficking and address demand for wildlife products, and the capacity for homegrown civil society and opinion leaders to be a positive force for change in an area traditionally led by Western environmental organizations. The third section reviews in detail the results of the experimental survey on demand for ivory in China. This study tested how ivory consumers and non-consumers respond to conservation messaging by measuring how this messaging influences responses to a range of questions covering everything from intent to buy ivory to attitudes towards market regulation. The hope is that tentative conclusions drawn from these results can be used to inform civil society efforts, improve information campaigns, and strengthen enforcement operations in China and elsewhere.

DEFINING DEMAND FOR IVORY

Demand—for any product—is a notoriously problematic concept to define. The commodification of ivory is particularly complex because it is driven both by recent capitalist globalization and, paradoxically, by a deep-rooted cultural and historical resistance to modernity and materialism. It is a product whose value is created both by the influence of broad economic trends and by narrower personal and cultural factors that are difficult to measure. Micro-economic theories of scarcity and information uncertainty give only a partial picture of how demand develops and persists, and can at times be misleading. Psychological and socio-cultural perspectives, while they shed greater light

on the motivations of individual consumers, are difficult to generalize and researchers may at times find themselves missing the forest for the trees. A balanced approach that combines the relevant economic principles with a closer look at the complex cultural and historical determinants of demand is necessary to craft more effective demand reduction strategies. It is necessary to assess both global economic trends and consumption habits at the national, local, and individual levels to explain the surge in demand for ivory. Both exogenous political factors, such as the CITES one-off sales and inconsistencies in national level ivory policy, and endogenous factors, such as cultural, historical, and personal values attributed to ivory play highly influential roles on consumer behavior. The goal of this study is to—to the extent possible—disentangle these effects and provide a clearer picture of what drives demand for ivory in China.

Endogenous Factors

Although the importance of understanding the profile of an ivory consumer cannot be understated, it remains one of the most difficult tasks conservationists face because triggers for consumption can vary hugely from individual to individual. Nonetheless, it is necessary to work to identify commonalities between consumers at global and regional levels in order to better understand the nature of ivory demand and how to address it. Although it is well understood that demand analysis is critical to addressing consumption, it is only recently that scholars and environmental organizations have dedicated greater focus to it. ENGOs such as the National Geographic Society, the International Fund for Animal Welfare, World Wildlife Fund for Nature, and the Nature Conservancy along with many independent researchers have contributed greatly to understanding the factors that contribute to demand and how they can be targeted. This section focuses on what we know thus far about who buys ivory and for what reasons by

looking at broad regional surveys and more specific in country research. Three broad categories help describe ivory's perceived desirability among consumers: its cultural and aesthetic value as a historically important art form in Asia and elsewhere, the value of conspicuous consumption and gift giving among the middle and upper classes, and its investment potential due to increasing scarcity.

Ivory was treasured throughout Chinese history for its perceived spiritual traits and as the material most befitting of Buddhist fine art carvings. Ivory carving dates back to prehistoric China and references to ivory as one of the principle raw materials in art production can be found in some the earliest surviving texts.⁹ In ancient dynasties, the elephant was closely associated with royalty and some Buddhists believe the animal itself to be an incarnation of the Buddha.¹⁰ It was and continues to be reputed to have spiritual and health benefits for those who wear it. For centuries ivory carving was preserved as one of the great Chinese art forms and, until very recently, the government actively promoted traditional carving as intangible cultural heritage. In fact, the ivory carving industry was in decline in China for much of the 20th century until the intervention of the government. Beginning in 2006, China's State Forestry Administration (SFA) actively lobbied CITES to allow one-off sales of ivory from African countries in the name of preserving and sustaining China's cultural heritage and as means of supplying a booming arts investment industry.¹¹ In China, Buddhist religious art has become a multi-billion dollar industry and continues to grow.¹² Fine art collectors who seek high-value

⁹ Carl W. Bishop, "The Elephant and Its Ivory in Ancient China," *Journal of the American Oriental Society* 41 (1921): pp. 290 - 306.

¹⁰ Ibid: 301.

¹¹ Yufang Gao & Susan G. Clark, "Elephant Ivory Trade in China: Trends and Drivers," *Biological Conservation* 180 (December 2014): pp. 23–30.

¹² Bryan Christy, "Ivory Worship," *National Geographic* 222 (2012): pp. 28–61.

traditional ivory carvings have proven a persistent demand group.¹³ Although there is a long history of ivory carving in China, the recent demand boom can be largely attributed to rising incomes and state-led promotion of the industry.

Conspicuous consumption of luxury goods and a deeply rooted tradition of gift giving are also important perspective from which to interpret the nature of demand for ivory in Asia. Commercial value is only one aspect of ivory's overall value and can be misleading if historical, social, and cultural qualities are not considered. Previous survey research has described likely buyers of ivory as "motivated by a desire for products that convey financial and social status," and are most drawn to ivory because of its "suitability for gifting."¹⁴ The giving of luxury gifts endows prestige on the receiver and is closely related to maintaining face (*mianzi*) and bolstering *guanxi*, the important network of personal relationships.¹⁵ In China, *guanxi* is viewed as essential in enhancing social status and opening doors for professional advancement. Closely associated with social influence and power, *guanxi* necessitates the constant reciprocal exchange of favors and gifts.¹⁶ Ivory and other high-value luxury goods are a social currency viewed as necessary in navigating upward through China's rigid social and professional hierarchies. Giving ivory gifts is not only a way to pay deep respect and honor to the recipient, but is also a means of expressing ones own social status and wealth. Ivory's value is inflated by its transactional nature, building status not only for the receiver, but the giver as well.

¹³ Lishu Li. Interview by author. In-person interview. Guangzhou, China, 21 February 2017.

¹⁴ National Geographic and Globescan. *Reducing Demand for Ivory: An International Study*. National Geographic, 2015. Accessed March 18, 2017. http://press.nationalgeographic.com/files/2015/09/NGS2015_Final-August-11-RGB.pdf.

¹⁵ Gao & Clark. *Elephant Ivory Trade in China*: 27.

¹⁶ Wang Qian, Mohammed Abdur Razzaque, and Kau Ah Keng, "Chinese Cultural Values and Gift-giving Behavior," *Journal of Consumer Marketing* 24, no. 4. 3 July 2007: pp. 214–28.

Prior to the initial implementation of the China's domestic ivory ban in March of 2017, the price of ivory rose consistently and dramatically. Between 2006 and 2011, the wholesale price of ivory tripled to as high as 2,300 USD/kg.¹⁷ It is no wonder that, with short-term returns as high as these, one of the common reasons cited by dealers and buyers for purchasing was ivory as an alleged "inflation-proof investment."¹⁸ In a previous survey of Chinese ivory consumers, 16% of those who had purchased ivory claim they did so as an investment with the intention of reselling when prices increased.¹⁹ In the survey completed for this report, 30% of all respondents claimed financial value was the most important reason for purchasing ivory. In addition to promoting its cultural value, many in the carving and sales industries advertise ivory as a viable investment opportunity, leading to speculation among buyers.²⁰ In an economy with a shaky and heavily regulated stock market and a volatile property market, ivory, with the high returns it promises, can be an appealing alternative investment. This, coupled with an ambiguous legal status, can potentially draw a diverse mix of investors. As the government begins implementing the ivory ban in China, ivory's market value—and thus its desirability as a legal investment option—has shown initial signs of decline. However, less regulated markets across Asia have seen demand and prices for ivory continue to rise, allowing Chinese investors opportunities for profit-seeking in a deeply integrated international market place. Furthermore, while smaller scale illegal ivory seizures had begun to decrease through 2014, medium and large scale seizures remained constant,

¹⁷ Grace Gabriel, Ning Hua, Juan Wang. *Making a Killing : A 2011 Survey of Ivory Markets in China*. Yarmouth Port, MA: IFAW, 2011. (Accessed: 14 February 2017). <http://www.ifaw.org/sites/default/files/Making%20a%20Killing.pdf>.

¹⁸ Gao and Clark, "Elephant Ivory Trade in China.": 27.

¹⁹ National Geographic and Globescan. *Reducing Demand for Ivory*: 19.

²⁰ Aster Zhang, , Ph. D., Beijing Normal University. Interview by author. Web call. Beijing China, 31 March 2017.

implying a presence of organized crime and a persistent black market.²¹ The impacts of the Chinese domestic ivory ban will be discussed in the next chapter.

Exogenous Factors

In 2008, under pressure from the ivory carving industry and state agencies, CITES permitted a one-off sale of 62 tons of confiscated African ivory to China.²² This was the second large-scale sale of its kind, the first of which went to Japan in 2006.²³ The belief was that flooding the Chinese market with surplus ivory would depress prices and decrease demand and the extra revenue generated could be reinvested into conservation projects. The Chinese government instead released limited amounts of the ivory to state-sanctioned factories over time, causing prices to rise and fueling demand over an extended period.²⁴ Parsing it out over time in this way also allowed unscrupulous dealers to replenish ‘legal’ stocks by laundering illegal ivory through their inventories. The fact that four government owned facilities were the principal beneficiaries of this sale, and that they profited from an almost 1000% mark-up (a government fixed price), only emphasizes the conflicts of interest.²⁵ CITES voluntary nature and its reliance on effective self-policing by signatory governments have caused further problems for uniform enforcement. Under the treaty’s provisions, countries may take exemptions to trade bans if they feel unfairly impacted. Between 2011 and 2013, Zimbabwe took an exemption from the ban in order to export worked ivory products to China. Trophy and antique exemptions have created a market environment where legal and illegal ivory mix

²¹ CITES. *Report on the Elephant Trade Information System (ETIS)*. CoP17 Doc. 57.6 (Rev. 1). Johannesburg, South Africa, 2016.

²² IFAW. *Making a Killing*: 2.

²³ CITES. *Report on ETIS*: 5.

²⁴ Christy, “Ivory Worship.”

²⁵ Environmental Investigation Agency. *Vanishing Point: Criminality, Corruption, and the Devastation of Tanzania’s Elephants*. London, UK. November 2014: 29-30.

indiscriminately in regulated markets and consumers have little capacity to ascertain what they are buying, where its from, and the ethical dilemmas involved. Furthermore, the implications of the international community's sole organization empowered to regulate trade in endangered species sending mixed messages about the acceptability and legality of ivory cannot be understated. CITES inconsistency before pressures from demand and supply countries has facilitated the growth of a gray market and increased moral ambiguity around the consumption of ivory.

The recent history of Chinese wildlife conservation policy has also been one of legal ambiguity and mixed messaging. Prior to the recent ban, the SFA's self-stated goal behind the regulation of the ivory market was less one of conservation and more the promotion of intangible cultural heritage.²⁶ Government agencies are also responsible for licensing, monitoring, and extracting revenue from the 37 factories and 145 legal ivory retail outlets. Combining active support for a legal domestic carving industry on one hand, and rigid law enforcement to suppress illegal trade through complex inter-agency responsibility on the other, is a difficult balancing act to accomplish. These conflicting policies have resulted in conflicts of interest and a series of half-measures, which have facilitated the growth of a large ivory gray market in China. Discrepancies between national laws and an opaque supply chain have help create what Annette Hübschle calls "contested illegality," a space in which legal ambiguity and cultural resistance allow for the rationalization of immoral behavior.²⁷ A consumer's distance from the poaching crisis and deeply entrenched attitudes towards ivory as an important cultural commodity can

²⁶ Yufang Gao & Susan Clark. "Perceptions and Information on Elephant Ivory Trade in China: Opportunities and Recommendations." *The International Journal of Conservation*. Cambridge University Press (unpublished).

²⁷ Annette M. Hübschle. *A Game of Horns: Transnational Flows of Rhino Horn*. Dissertation. IMPRS-SPCE, Cologne, Germany (2016). http://pubman.mpdl.mpg.de/pubman/item/escidoc:2218357:5/component/escidoc:2261029/2016_IMPRSDiss_Huebschle.pdf.

allow for the rationalization of illegal behavior and insulate the consumer from guilt and even punishment, especially where enforcement is inconsistent or lacking. Problematic legislation, failures of law enforcement to control black market sales, and the laundering of illegal ivory through legal stocks are discussed in detail in the subsequent chapter.

Organized crime, perhaps the most persistent of the exogenous factors, is present at each level of the ivory supply chain, implicating everyone from poachers and park rangers in Africa to law enforcement and government officials in Asia. Opportunities for corruption exist at all points in the trade chain, and once illegal ivory has entered the market, it is particularly hard to weed out.²⁸ Genetic testing and carbon dating techniques are, as of yet, prohibitively expensive and slow to implement. Furthermore, whereas many end consumers can be susceptible to targeted information campaigns and threats of punishment, criminal enterprises are not similarly responsive and are also more adept at navigating enforcement obstacles. Investigators have discovered ties between ivory poachers and Chinese criminal syndicates that often use complex networks of shell companies to evade detection.²⁹ Most recently, a report by the Environmental Investigation Agency (EIA) detailed the expansive international network of one Chinese criminal syndicate that relied on complicity from park rangers, customs officials, and transporters throughout a number range countries in Africa and transit ports in Asia.³⁰ The organization, which has been in operation for two decades and is implicated in large-scale ivory seizures from Africa to Southeast Asia, proved resilient to risk and, having never suffered an arrest, very adaptable to changing law enforcement circumstances.³¹

²⁸ Jeffrey Gettleman, “Closing China’s Ivory Market: Will It Save Elephants?”.

²⁹ EIA. *Vanishing Point*: 31-32.

³⁰ The Environmental Investigation Agency, “The Shuidong Connection: Exposing the Global Hub of the illegal Ivory Trade.” London, UK. July 2017.

³¹ Ibid.

The most troubling aspect is that criminal prosecution and punishment lags far behind the surge in poaching and trafficking. In many cases, especially in Africa but in demand countries as well, criminal punishment often amounts only to small fines and many cases don't result in criminal prosecutions at all. China has some of the strictest punishments for illegal trafficking in the world. In 2013, eight smugglers were sentenced to up to 15 years in prison for smuggling more than three tons of ivory into China.³² A handful of high profile arrests and long prison sentences have not sufficed to dissuade poaching and trafficking, however, as only a small percentage of smugglers are caught and punished. Professional criminal enterprises (as in the case of the Shuidong network mentioned above) may never suffer more than the occasional confiscation of a shipment, financial losses that they can quickly recuperate.³³ Between 2009 and 2013, only 12% of large-scale seizures were accompanied by reports of suspects or subsequent arrests.³⁴ Ivory has become so lucrative that profits outweigh the relatively low risk of being caught. Furthermore, the flexibility of criminal networks and their presence around the world allows them to shift from market to market and from illicit product to illicit product relatively easily, exploiting the discrepancies in laws and enforcement capacity between different countries. Finally, because the supply-chain is transnational, a concerted and sustained international law enforcement effort is needed. Outside of a handful of highly publicized and short-lived operations, this collaboration has been slow to evolve. Discrepancies in national wildlife trafficking laws and enforcement efforts have made unified efforts to address transnational wildlife crime difficult, to say the least.

³² CITES, "China Increases Prosecutions in Response to Illegal Trade in Elephant Ivory," Accessed: 11 July 2017, https://cites.org/eng/news/sundry/2013/20131128_china_ivory_prosecutions.php.

³³ Ibid.

³⁴ Tom Milliken. *Illegal Trade in Ivory and Rhino Horn*: 9.

Self-interest and imperfect information have further complicated international consensus on both the threats to elephants and the best means of addressing them by creating space for competing perceptions of scientific reality. Only recently have ivory consumers in Asia begun to come to terms with the impact of their individual consumption on wildlife half a world away. Many have only recently realized that ivory consumption leads to the slaughter of elephants. The Chinese word for ivory, ‘xiangya’ or ‘elephant tooth,’ has led some Chinese to believe that elephants simply lose their tusks naturally. Even among consumers who understand ivory’s origin, the rationalization that ‘my meager purchase of a small piece of carved ivory can’t possibly contribute to poaching in Africa’ is persistent.³⁵ The fact that a large majority of Chinese ivory consumers supported a complete market ban is further evidence of a stark divide between individual consumption behavior and political attitudes.³⁶ Knowledge about the connections between buying ivory and elephant population declines (and negative follow-on effects for human populations) is new in Asia, and even now, is most common among wealthier urban citizens. This has allowed for equivocation and justifications, not only at the individual level, but also among government agencies. Until recently, China’s SFA had maintained that allegations that Chinese demand was driving elephant poaching were “not evidence-based,” and that Western NGOs and conservationists had politicized the ivory discourse.³⁷ The perpetuation of competing ‘East versus West’ rivalries, while it may satisfy narrow political interests, is a false frame that presents facts as subjective ideologies. Politicizing conservation allows for counter-productive actions that pit market forces against environmental policy. Scientific consensus is a basic prerequisite for

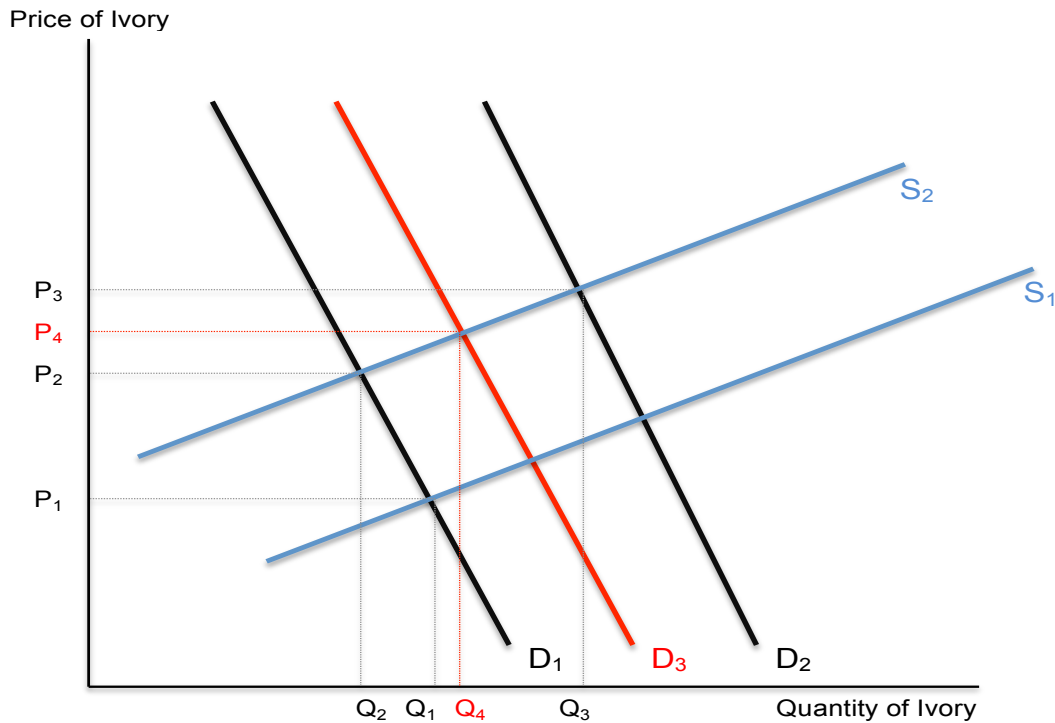
³⁵ National Geographic & Globescan. *Reducing Demand for Ivory*: 19.

³⁶ Ibid.

³⁷ Gao & Clark. *Perceptions and Information*: 10 – 11.

fighting international wildlife crime in a unified fashion. Only from this consensus can political cooperation on transnational environmental issues follow.

Supply and Demand for Elephant Ivory



The supply and demand curves show a theoretical model for shifts in quantity and price of ivory. As enforcement improves and elephant numbers drop, the supply curve shifts up (S_2), quantity drops and price increases (P_2 and Q_2). Rising incomes in Asia move the Demand curve right (D_2) increasing prices further (P_3), which can lead to increased poaching (Q_3). In order to address this, demand reduction efforts and better enforcement in Asia can move demand back to the left (D_3), reducing quantity supplied (Q_3) and price (P_3).

By far the strongest macro-driver of demand for ivory is unequal economic growth between Asia and Africa. China's middle class is projected to account for more than a third of its population by 2030, and luxury goods consumption grew at a rate of 16 to 20 percent per year from 2009 to 2013.³⁸ Meanwhile, the income gap between China

³⁸ Mandy Zuo. "China's Middle Class to Rise to More than Third of Population by 2030, Research Firm Says," *South China Morning Post*, November 3, 2016, <http://www.scmp.com/news/china/money-wealth/article/2042441/chinas-middle-class-rise-more-third-population-2030-research>.

and many of the African countries where elephants are endemic—some of Africa’s poorest—continues to grow. Ivory yields a ten times higher price in China than in Africa, further fueling the poaching crisis.³⁹ The above theoretical model shows broad macro-economic trends in the ivory market, but only gives a partial picture of the complex interactions between rising incomes and prices. Slumping elephant numbers and increased anti-trafficking and anti-poaching efforts have restricted supply and potentially exacerbated the increase in prices, leading some economists to advocate for a controlled legal trade in ivory to depress prices and control demand. This view disregards the environmental and structural constraints of the transnational ivory supply chain and assumes a population of elephants that can satisfy ever-growing demand.

Further complicating issues, luxury wildlife products like ivory and rhino horn may in actuality be price-inelastic, meaning that as prices increase, the demand for these products remains constant or increases in tandem,⁴⁰ Conversely, falling prices—due to the availability of a newly legal supply of ivory, for instance—may not have the depressing effect on demand that economic models would predict. An increase in price, therefore, spurs more poaching and may in fact drive demand as well. The more valuable and difficult to obtain a product is, the greater the perceived value. While rising prices might prohibit some marginal consumers from buying, quickly rising incomes in Asia allow more and more potential consumers access, especially as relative incomes in Africa drop. This supports the argument against a controlled legal trade, which, due to

Dominic Barton, Yougang Chen, and Amy Jin, “Mapping China’s Middle Class” McKinsey & Company, Accessed: 18 May 2017, <http://www.mckinsey.com/industries/retail/our-insights/mapping-chinas-middle-class>.

³⁹ Gao & Clark, “Elephant Ivory Trade in China”: 29.

⁴⁰ Daniel W. S. Challender and Douglas C. MacMillan, “Poaching Is More than an Enforcement Problem: Poaching Is More than an Enforcement Problem,” *Conservation Letters* 7, no. 5 (September 2014): 486–87.

elephants' long gestation periods and weak enforcement along the supply chain, would likely only fuel demand and lead to sharper declines in elephant populations.

Consumer Groups

Though motivations for ivory consumption can vary substantially between individuals, past research has shed light on certain common factors between consumers at national and international levels. In a 2015 Asia-wide survey of consumers, National Geographic and Globescan discovered that 22 percent of respondents were likely buyers, and that they typically described themselves as “fashionable, social, and religious.”⁴¹ A 2015 survey of 1,000 urban “opinion influencers” by The Nature Conservancy showed this number increases to 35 percent within the millennial generation.⁴² The research shows Chinese ivory consumers tend to be younger, somewhat better educated, have a religious or spiritual inclination, and fall within the middle-income bracket.⁴³ Those who reject ivory consumption, on the other hand, tend to be older, less well off, and less educated.⁴⁴ This suggests that education campaigns alone will do little to dissuade a growing number of consumers who are already aware of the poaching crisis in Africa from buying ivory products.

There is a stark divide between attitudes towards ivory consumption and support for ivory market regulation. Previous survey results show that ivory consumers are as likely as non-consumers to understand and be concerned with the impacts of the trade on elephants.⁴⁶ Both Chinese buyers and non-buyers were also much more likely to support

⁴¹ National Geographic & Globescan. *Reducing Demand for Ivory*: 3.

⁴² The Nature Conservancy, “Curbing Ivory Consumption in China,” The Nature Conservancy. Accessed: 21 May 2017. <https://www.nature.org/ourinitiatives/regions/africa/ivory-consumer-research-faq.pdf>.

⁴³ National Geographic & Globescan. *Reducing Demand for Ivory*: 18.

⁴⁴ Ibid.

⁴⁶ National Geographic & Globescan. *Reducing Demand for Ivory*: 7.

a total ban on domestic ivory sales than not (67% versus 79%).⁴⁷ National Geographic found three additional factors to be correlated with Chinese demand: the idea that individual consumption has little impact on demand, that real and fake ivory can be easily distinguished, and that ivory will soon be impossible to acquire legally.⁴⁸ Many Chinese consumers understand the impact of the trade, but until now, have justified consumption in terms of its legality.⁴⁹ “Protection according to the law” and “selective protection” are policies that enjoy increasing support in China among wildlife consumers, but also build in a rationale for continued consumption.⁵⁰ Traditionally in China, there exists a tendency to rely on government intervention as a catalyst for social and political change, downplaying the significance of individual action. This attitude places the onus of demand reduction and conservation on the government and has the effect of exempting consumers from responsibility for their own actions. This way of thinking is problematic and can lead to justifying a wide range of socially detrimental behaviors. It also highlights the importance of greater policy clarity and consistency from the Chinese government. 60% of urban residents surveyed stated only “little” understanding about Chinese domestic ivory regulations.⁵¹ Equally problematic is a potential surge in demand from buyers in the lead up to the complete ban, especially since the government has decided to do it in phases over the course of 2017. Ban implementation and preliminary effects on demand are discussed in the following chapter.

Another group of concern is international travelers who may come in contact with ivory abroad or travel abroad with the intent of buying wildlife that is more strictly

⁴⁷ Ibid: 19.

⁴⁸ Ibid.

⁴⁹ Aster Zhang. Interview by author.

⁵⁰ Li Zhang and Feng Yin, “Wildlife Consumption and Conservation Awareness in China: A Long Way to Go,” *Biodiversity and Conservation* 23, no. 9 (August 2014): 2371–81.

⁵¹ The Nature Conservancy. “Curbing Ivory Consumption in China.”

controlled in China. Chinese who travel abroad and are thus exposed to wildlife trafficking in countries with laxer laws risk potentially becoming traffickers themselves.⁵² Hong Kong, now believed to have the largest market for ivory of any city in the world, has become a popular destination for mainlanders seeking to buy luxury goods including wildlife. It is believed that over 90% of Hong Kong ivory products are sold to mainland visitors and smuggled back into China illegally.⁵³ Laxer penalties for ivory trafficking in Hong Kong along with weak customs enforcement at the border have exacerbated the flow of illegal ivory into the mainland.⁵⁴ Further complicating matters, despite constant petitioning from wildlife groups, the Hong Kong government has announced it will not close its legal ivory market until 2021.⁵⁵ Discrepancies between laws on the mainland and in Hong Kong will likely have the effect of transplanting demand. Similar problems of ineffective enforcement and open markets exist across Southeast Asia, emphasizing the need for demand reduction in China, regardless of the ban.

What We Don't Know

The above profile of demand for ivory in China forms the theoretical basis for the experiment presented in the third section of this report. Although much research has been devoted to understanding the profile of the ivory of consumer in China and elsewhere, there is a dearth of experimental research into understanding *how* to influence ivory consumption behavior. Identifying past and potential ivory consumers is just the first piece of the puzzle. Demand is fluid after all, not static. It is a dialectic process between

⁵² Lishu Li. Interview by author. In-person interview. Guangzhou, China, 21 February 2017.

⁵³ Esmond Martin & Lucy Vigne. "Hong Kong's Ivory: More items for sale than any other city in the World." Save the Elephants. Nairobi, Kenya: 2015.

⁵⁴ Cheryl Lo & Gavin Edwards. *The Hard Truth*.

⁵⁵ Naomi Larsson, "Hong Kong Launches Bill to Ban Domestic Ivory Trade," *The Guardian*, 26 June 2017, <https://www.theguardian.com/environment/2017/jun/26/hong-kong-launches-bill-ban-domestic-ivory-trade>.

an individual and society, set within certain economic constraints. It is not enough to observe what a consumer looks like. What is needed is a better understanding of that consumer's motivations and how those motivations can be altered to dissuade future consumption. This is the jumping off point for this report's experimental survey, which tests how potential ivory consumers react to different types of conservation messaging by measuring variation in responses to questions about consumption habits and attitudes following a specific treatment. This exploratory work seeks to answer a host of questions: what messaging proves most effective in altering how people respond to questions about their consumption behavior and attitudes towards conservation efforts? Which subgroups of the population are more or less persuadable with conservation messaging? How do demographic variables such as income, education, and age influence the efficacy of messaging? How do the treatments effect attitudes towards conservation and can these messages be used to stimulate social and political action? Section three seeks to shed light on these questions and raises many more.

Identifying Consumers to Influence

The NGO and conservation community must identify past and potential consumers most capable of being persuaded by information campaigns if they are to better tailor messages and conserve valuable resources. The Nature Conservancy identified 40% of their sample as "persuadable," half of whom are under 40 years of age and two-thirds of which are in the upper middle class.⁵⁶ Those who are "persuadable" could have imperfect knowledge of domestic legislation, the impacts of the ivory trade on wildlife and humans, or simply remain unconvinced by current conservation campaigns. Researcher Ana Elena Ramirez Corte suggests information campaigns should target

⁵⁶ The Nature Conservancy. "Curbing Ivory Consumption in China."

potential consumers that are “negative-attitude, positive-behavior,” meaning those that are non-buyers only due to circumstance—financial or otherwise—and may become active consumers should the opportunity arise.⁵⁷ Those who exhibit a positive conservation attitude but a negative behavior (that is continue buying ivory) pose a problem for conservation organizations. It is possible that demand for ivory within this group can only be effectively reduced through market regulation and the threat of punishment. Consumer groups that may be more effectively swayed (and by which types of policy action) is covered in detail in the survey results section.

It is important that messaging efforts be tailored to fit specific groups of consumers and be presented in culturally specific frames. Some consumers may be more easily swayed by clear and unequivocal legal restrictions on ivory, while others may be more responsive to conservation oriented messaging. Since ivory still occupies an important cultural and spiritual position, some consumers may be persuaded to replace ivory with an equally important material that represents those same values—such as the seeds of the Bodhi tree, already widely popular in China as representative of Buddhist enlightenment. Public awareness campaigns, which until recently have focused on negative reinforcement, could be supplemented with positive messaging that avoids shaming and guilt. These feelings can trigger defense mechanisms in consumers that can effectively undercut attempts at true behavior change,⁵⁸ especially if the messaging comes from foreign organizations. While shaming may be effective if it comes from peers, it may also be important to offer consumers a way to satisfy their particular needs

⁵⁷ Ana Elena Ramirez Corte, *Promoting Pro-Environmental Attitudes and Behaviors to Reduce the Consumption of Illegal Wildlife Products in China*. Masters Report, University of Texas, Austin (August 2015).

⁵⁸ Renee Lertzman, *Reducing Desire for Ivory: A Psycho-social Guide to Address Ivory Consumption*. WWF, 2016. Accessed: April 10, 2017. https://c402277.ssl.cf1.rackcdn.com/publications/981/files/original/ReducingDesireforIvory_011917_print.pdf?1484847912.

for social and cultural connection, rather than severing those connections by attempting to impose Western notions of conservation ethics.⁵⁹ Experimental testing on the efficacy of positive messaging, however, is beyond the scope of this report.

The messenger can be equally relevant to the strength of the message. Renowned international figures such as Britain's Prince William and sports celebrity Yao Ming have appeared in campaigns to reduce ivory consumption in China. Some consumers may respond to official announcements, and others may be more susceptible to celebrity ambassadors. What is needed are key opinion leaders who have a strong personal connection to and common ground with the specific social groups who are most likely to buy ivory. The next section also provides a brief history of western-led conservation campaigns in China, a discussion of their strengths and weaknesses, and potential improvements for future public education campaigns.

Conclusion

The multifarious origins of demand for a product like ivory, that is itself surrounded in misinformation, are difficult to parse out. In China today, ivory occupies a tenuous position between a source of cultural prestige and one of social stigma. A growing understanding amongst the Chinese middle and upper classes of the nature of the ivory trade and its impacts has only added to its contested position and complicated the current understanding of demand. Growing awareness has at times led to shame, guilt and subsequent dishonesty, which can create a huge amount of noise and imprecision in the research process. It is very difficult to ascertain definitively whether or not respondents are being truthful about their attitudes towards ivory. This is not to discourage the pursuit of a better understanding of the cultural, economic, and psychological correlates of

⁵⁹ Ibid.

demand for ivory. Quite the contrary, it is meant to encourage greater in-depth research. It is essential to understand whether information campaigns are having their intended effect or are instead backfiring, undercutting conservation efforts by hardening negative attitudes and driving demand underground. There is a pressing need for both broad-based surveys as well as more targeted focus group and interview-based research into demand in order to hone in on those commonalities between individual consumers and across social strata.

II: The Party, Civil Society & Conservation

INTRODUCTION

In 2014, a flurry of news reports surfaced implicating President Xi Jinping's entourage of smuggling illegal ivory aboard his plane during an official state visit to Tanzania.⁶⁰ Other investigations have tied Chinese naval officers to ivory smuggling between ports in Eastern Africa and China.⁶¹ Although the veracity of these reports is difficult to confirm definitively, the implications are grave. Not only does this bely ulterior political motives in China's recent pro-conservation overtures in African countries, it also implies a potential vested interest in continued exploitation of elephant ivory by certain politically influential people. Neither of these implications is reassuring and both complicate interpretations of recent commitments to the closure of the domestic ivory market. There are good reasons, however, to be hopeful. China has some of the world's strongest criminal penalties for wildlife trafficking and its commitment to controlling the illegal trade is consistent and strong. Its implementation of the initial stages of a ban on domestic ivory in March reaffirms commitments made between presidents Xi and Obama in 2015 and sends a strong message to the international community that China is dedicated to the prohibition of commercial ivory.

Promises made by high ranking officials are just the beginning, however, and though President Xi's carry considerable weight in China, a complicated political landscape and an under-informed and under-mobilized polity can pose serious obstacles to implementing new policy. China's human-centric environmental legislation, imperfect

⁶⁰ Christina Russo. "Q&A: Report Alleges Governments' Complicity in Tanzanian Elephant Poaching." *National Geographic News*, 10 November 2014, Accessed: 17 May 2017
<http://news.nationalgeographic.com/news/2014/11/141108-tanzania-ivory-smuggling-china-world-elephants-animals/>.

⁶¹ Environmental Investigation Agency. *Vanishing Point*: 21.

enforcement record, and complex bureaucratic hierarchy—where responsibility and authority are divided both horizontally and vertically—can slow progress to a halt if there is insufficient pressure from both the political elite and the grassroots. This chapter examines the successes so far and the obstacles that still remain for the closure of China's ivory markets, legal and illegal.

CHINA'S LEGAL FRAMEWORK

In 1981, China ratified the Convention on International Trade in Endangered Species (CITES), the first multilateral environmental treaty it had ever joined.⁶² Today the CITES management authority of China is one of the world's largest, with 22 offices and 130 staff members across the mainland.⁶³ China has also participated in all three COBRA operations, international law enforcement stings that achieved notable successes at targeting wildlife trafficking crimes. The evolution of China's domestic wildlife legislation can be understood as an incremental recalibration meant to reflect the changing environmental priorities of its people as well as its evolving role on the global stage. The nature of China's decentralized authoritarianism, however, means that central government mandates can look quite different from locality to locality upon implementation. Misaligned incentives and information asymmetries between central and local officials are significant obstacles to combatting environmental crime.

The Ivory Ban

On March 24th of this year, China's State Forestry Administration publicly announced that within a week, 67 of China's 172 licensed carving facilities and retail

⁶² John Scanlon. "Thirtieth Anniversary of CITES in China." Address, CITES, Beijing, 8 April 2011. https://cites.org/eng/news/SG/2011/20110408_SG_remarks_China_30th.php. (Accessed: 26 May 2017).

⁶³ Ibid.

outlets would be shut down, with the remaining to close by the end of the year.⁶⁴ Along with the notice were posted the names and information for each of the businesses and their dates of closure.⁶⁵ This historic decision by no means happened overnight. It took months of negotiation and hard work by the NGO community, academics, and government agencies within China and abroad. Stakeholders had to be consulted, implementation schedules and processes planned, and contingencies discussed. Furthermore, the importance of high-level government-to-government dialogue in giving momentum to the ban cannot be understated. Aster Zhang, of Beijing Normal University, who worked closely on the ban in the years prior to its announcement, says international political pressure and visits from foreign dignitaries were crucial in moving the ban into its final stages.⁶⁶ The British royal family, for one, has made conservation and fighting wildlife trafficking one of its pet causes. Over the last few years Prince William has made numerous visits to China and appeals to the government to support efforts to control ivory trafficking with significant successes, including a one-year import ban imposed shortly before his visit to an elephant sanctuary there.⁶⁷ Furthermore, the mounting negative publicity generated by ivory poaching and soaring Chinese demand both internationally and within China reached a critical point and could no longer be ignored. The Communist Party's interest in maintaining its international reputation also played a vital role in the decision to begin implementing the ban earlier this year.

⁶⁴ 国家林业局 (China State Forestry Agency), “国家林业局公布停止商业加工销售象牙及制品活动的单位和场所”(“SFA Announces the Halt in Production and Sale of Ivory Products”). *澎湃新闻* (*The Paper*). 24 March 2017. http://www.thepaper.cn/newsDetail_forward_1647114.

⁶⁵ Ibid.

⁶⁶ Li (Aster) Zhang. Interview by author.

⁶⁷ Tom Phillips, “China Imposes One-Year Ivory Ban on Eve of Prince William Visit,” *The Telegraph*. February 27, 2015, <http://www.telegraph.co.uk/news/worldnews/asia/china/11438811/China-imposes-one-year-ivory-ban-on-eve-of-Prince-William-visit.html>.

The most recent ban also built off a history of partial bans and increased regulations on the domestic ivory market that, while doing little to curb demand on their own, contributed to the understanding of how a successful ban could be implemented. In February 2015, the Chinese government introduced a one-year moratorium on the import of ivory carvings from Africa produced after the 1975 CITES trade ban—already illegal by international law—to assess the effects of a ban.⁶⁸ This temporary moratorium was criticized by the NGO the Environmental Investigation Agency (EIA) for being “window-dressing,” as it did nothing to address the massive, poorly regulated domestic ivory market.⁶⁹ In March 2016, the one-year ban was expanded to include pre-convention ivory (all ivory acquired prior to the CITES 1975 ban) and extended until the end of 2019.⁷⁰ This reflected an understanding that, as long as pre-ban ivory continued to enter China, illegal ivory would continue along with it. Under the temporary ban, ‘non-commercial’ ivory, loosely defined as objects meant for “public exhibition, scientific exchange, and cultural research,” could still be imported legally.⁷¹ Although the ban extensions were meant to signal a stronger commitment to conservation in China, these potential loopholes and an open domestic market created legal ambiguity and an easily exploitable gray market.

The 2017 ban on domestic ivory is unequivocal in its commitment to “phase out commercial processing and sale of ivory and ivory products,” but much of the language

⁶⁸ Xinhua News. “China imposes one-year ban on ivory carvings imports.” *Xinhua*. 25 February 2015. http://news.xinhuanet.com/english/2015-02/26/c_134021380.htm. (Accessed: 3 March 2017).

⁶⁹ Environmental Investigation Agency, “China’s Carved Ivory Import Ban ‘Largely Window-Dressing,’” *EIA International*, February 27, 2015, <https://eia-international.org/chinas-carved-ivory-import-ban-largely-window-dressing>.

⁷⁰ Su Zhou. “Import Ban on Ivory Expanded.” *China Daily*. 23 March 2016.

http://www.chinadaily.com.cn/china/2016-03/23/content_24027678.htm. (Accessed: 3 March 2017).

⁷¹ *Ibid.*

in the text remains ambiguous.⁷² No processing or sales of ivory will continue past December 31st 2017, except for non-profit organizations that are permitted to continue non-commercial “heritage research” in carving techniques.⁷³ The single exception to the commercial ban is one made for the auctioning of legally sourced ivory relics “under strict monitoring after administrative approval.”⁷⁴ The document does not specify either in what quantities this ivory will be auctioned, nor what agencies will be tasked with overseeing them and ensuring strict adherence to the law. The Wildlife Conservation Society’s (WCS) Aili Kang notes the importance of establishing how this “possible loophole” will be controlled and how government owned stockpiles will be managed for the new, more narrowly defined purposes.⁷⁵ The document calls on “all provincial, autonomous regional and municipal governments and relevant departments [to] take a leading role in the division of responsibilities,” but gives no guidance on how this division should be achieved.⁷⁶ China’s national and regional bureaucracies operate in a complicated network that is at once hierarchical horizontally and vertically. If it is to be left to the provincial governments to divide up responsibilities, it remains to be seen how inter-regional enforcement and coordination will be conducted. The potential for buck-passing and conflicts over authority are significant and will need to be addressed through more specific legislation at the provincial and local levels.

⁷² State Council of the People’s Republic of China, “A Notice by the General Office of State Council on the Orderly Cessation of Commercial Processing and Sale of Ivory and Ivory Products.” Translated by Wildlife Conservation Society. WCS Newsroom. 3 January 2016. <https://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/9578/China-Announcement-of-Domestic-Ivory-Ban-in-2017--English-Translation.aspx>. (Accessed: 8 February 2017).

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Aili Kang, “China’s Ivory Ban Has Played a Significant Role in De-Valuing Ivory.” *National Geographic Society (Blogs)*. 31 March 2017. <http://voices.nationalgeographic.com/2017/03/31/chinas-ivory-ban-has-played-a-significant-role-in-de-valuing-ivory/>. (Accessed: 25 May 2017).

⁷⁶ “A Notice by the General Office of State Council...” WCS Newsroom.

The ban's importance can not be understated, both for its symbolic weight as a signal to the international community and transnational organized crime, and for a number of practical benefits that can, if enforced properly, lead to a significant reduction in ivory consumption in China. Not only does the ban send a strong signal to the public that *all* consumption is illegal, but it also makes enforcement easier, as officers need not distinguish between pre-ban and post-ban ivory products.⁷⁷ Yannick Kuehl, regional director of Traffic East Asia, feels that the Chinese government is well positioned to enforce a domestic market ban, both because the political will now exists at the highest levels, and because of a greater capacity for intra-agency coordination at regional and local levels than exists in federalist systems like the United States.⁷⁸ Though it is true that political expediency does favor single-party regimes, policy at the central level and its implementation at the regional and local levels can look quite different once filtered through the multiple levels of bureaucracy. Ambiguous laws and inconsistent enforcement further weaken the signal strength of a domestic ban and must continue to be updated to show a strong, unflinching commitment to conservation. For its part, the Chinese government is continuing a strong enforcement campaign against illegal ivory and is working to raise awareness of trafficking crimes amongst its citizens, especially those most likely to come in contact with illegal products, such as international travelers.

Although it is still too soon to draw conclusions about the ban's impact on Chinese demand, initial market research shows a drop in prices beginning in 2015 and continuing through early 2017. Between Spring 2016 and Spring 2017, the median price for worked ivory in Guangzhou, a hub for the illegal wildlife trade, fell from 3,059

⁷⁷ Lishu Li. Interview by author. In-person interview. Guangzhou, China, 21 February 2017.

⁷⁸ Yannick Kuehl. Interview by author. In-person interview. Hong Kong, 17 February 2017.

USD/kg to 2,238 USD/kg.⁷⁹ Outside of China, less regulated and rapidly growing markets like Vietnam also saw tentative declines from a high 1,322 USD/kg in 2015 to 660 USD/kg in February of this year.⁸⁰ Vietnamese traders are now warier of trading to Chinese clients for fear of harsh penalties if they are caught.⁸¹ WCS's Aili Kang warns against drawing conclusions about price swings in China's ivory market **without long-term monitoring**, as they have been inconsistent across different platforms and among different categories of products.⁸² Since early 2016, while prices for smaller, more easily found items such as trinkets and jewelry dropped, prices for larger fine art pieces were less predictable and are more difficult to track generally.⁸³ Similarly, while prices in the physical market did decline, prices for online listings have remained more consistent over the same period.⁸⁴ Reasons for this fluctuation in price are also subject to debate. Structural factors such as declining levels of economic growth and luxury consumption in China likely account for a significant part. A price drop may also be the result of a temporary glut in the supply rather than ebbing demand. It is also possible that vendors are slashing prices in advance of the impending ban to move as much of their remaining stock as possible before the end of the year.

It remains to be seen whether these price changes prove to be a permanent trend or are rather signs of a temporary market readjustment. One concern is whether or not buyers and sellers in the legal market will shift to the black market, simply transplanting existing demand. Because the market is still partially open, it is too soon to say.

⁷⁹ Aili Kang, "China's Ivory Ban Has Played a Significant Role in De-Valuing Ivory."

⁸⁰ Naomi Larsson, "China's Ivory Ban Sparks Dramatic Drop in Prices across Asia," *The Guardian*, 2 June 2017. <https://www.theguardian.com/environment/2017/jun/02/chinas-ivory-ban-sparks-dramatic-drop-in-prices-across-asia>.

⁸¹ Ibid.

⁸² Aili Kang, Interview by author. Web call. Kunming China, 19 July 2017.

⁸³ Ibid.

⁸⁴ Ibid.

Furthermore, while prices in Asia may show preliminary signs of decline, the rates of poaching have not experienced a similar trend. Poaching has remained relatively constant since 2013 and is still well above threshold levels.⁸⁵ It is imperative that NGOs and government agencies keep a close eye on prices in both the legal and illegal markets through the end of this year and beyond to better understand the follow-on effects of the ban.

China's Wildlife Trafficking Laws

Few countries can match the severity of China's punitive measures for wildlife crime. Poaching the highly protected Giant Panda, for example, is punishable by death. Inconsistent application and a vague legal code, however, can hamper comprehensive enforcement. Until a revision that took effect at the beginning of 2017, the protection of China's wildlife was carried out under an outdated law that had remained essentially unchanged since 1988. Although the Wildlife Protection Law provides detailed punitive measures for relevant crimes, it also emphasized the human use of wildlife and prioritized the management, domestication and breeding of wildlife for commercial purposes.⁸⁶ It provided detailed information on the taxing of business revenue and the collection of duties, but did little to discourage the perception of wildlife as a commodity. The protection for utilization contradiction not only sent mixed messages to the public, but has also led to a number of practical obstacles to effective enforcement. The inclusion of one species to the register of protected species could, in effect, lead to increased illegal capture and speculation by traders for commercial breeding, which would endanger the survival of that species.⁸⁷ This could have the effect of inflating consumer demand for an

⁸⁵ CITES. "MIKE Report."

⁸⁶ Naomi Larsson, "China's Ivory Ban Sparks Dramatic Drop in Prices across Asia."

⁸⁷ Ibid: 83.

increasingly rare and prized wildlife product. Additionally, state sanctioned wildlife farming could incentivize the illegal capture and farming of wildlife for commercial use, further threatening wild populations.

The 2016 revised version of the wildlife law, while it does somewhat de-emphasize the human use aspect of the original law, still leaves much to be desired. Article 27 of the new law prohibits the sale and consumption of wildlife under “special state protection,” but again makes broad exemptions for “scientific research, captive breeding, public exhibition or performances, heritage conservation or other special purposes,” pending municipal government approval.⁸⁸ Furthermore, the differentiation between “special state protection” and “special local protection” could lead to conflicting laws at the local and national level. One positive change in the new law establishes liability for any individual or business involved in the production or sale of protected wildlife at any point in the supply chain. Articles 31, 32, and 33 prohibit the publishing of advertisements for, the provision of trading platforms (including e-commerce websites) for, and the unlicensed shipment of protected wildlife or wildlife products.⁸⁹ The revised law also provides for higher levels of government to address negligence or willful defiance of the statutes of the law by local officials.⁹⁰ In addition to civil and criminal penalties (including for the forgery of licenses and documents), the new law also mandates the confiscation of “all unlawful income,” language that reflects similar money laundering and racketeering statutes in the 2016 Global Anti-Poaching Act passed by the

⁸⁸ “Wildlife Protection Law of the People’s Republic of China.” 21st Meeting of the 12th Standing Committee of the People’s Republic of China. 2 July 2016. Translated by Environmental Protection Agency. https://eia-international.org/wp-content/uploads/WPL-Final-Law_translation_July-5-2016.pdf.

⁸⁹ Ibid.

⁹⁰ Ibid: Article 42.

United States Congress.⁹¹ The EIA, however, released a statement criticizing the revised law for doing too little to regulate the farming of endangered species and further promoting the “commodification” of wildlife in China.⁹² While some progress has been made, the lack of regulations and protections for captive-bred wildlife and the loopholes this provides for laundering wild animals through the industry are troubling. Furthermore, the vague exceptions to the ‘commercial use’ prohibition will make it exceedingly difficult for enforcement agencies to control how captive-bred wildlife is sold and utilized. Finally, while unlicensed commercial transactions are punishable under the law, illegal possession is not addressed.

There are a number of other laws employed in the prosecution of wildlife poaching and smuggling as well as the management of lawful import and export. Article 341 of the Criminal Law of the People’s Republic of China is used to prosecute all crimes relating to the poaching, sale, and purchase of wildlife and wildlife products:

Those who illegally hunt and kill rare and endangered wild animals which are under the state key production plan or illegally purchase, transport or sell those rare and endangered wild animals and their manufactured products are to be sentenced to not more than five years of fixed-term imprisonment or criminal detention, and may in addition be sentenced to a fine. In serious cases, those law offenders are to be sentenced to not less than five years and not more than 10 years of fixed-term imprisonment, and may in addition be sentenced to a fine. In especially serious cases, those law offenders are to be sentenced to more than 10 years of fixed-term imprisonment, and in addition be sentenced to a fine and confiscation of their properties.⁹³

The seriousness of the case is determined on an individual basis and is largely left to the discretion of the courts. The Regulation of the People’s Republic of China on the Administration of the Import and Export of Endangered Wild Fauna and Flora,

⁹¹ 114th U.S. Congress. *H.R.2494: Eliminate, Neutralize, and Disrupt Wildlife Trafficking Act of 2016*. (2016), <https://www.congress.gov/bill/114th-congress/house-bill/2494>.

⁹² Environmental Investigation Agency, “China’s Wildlife Protection Law,” *EIA International*, Accessed: 31 May 2017, <https://eia-international.org/our-work/environmental-crime-and-governance/illegal-wildlife-trade/tigers-other-asian-big-cats/chinas-draft-wildlife-protection-law>.

⁹³ *Criminal Law of the People’s Republic of China*. Amended by the 5th Session of the 8th National People’s Congress (1997). <http://www.fmprc.gov.cn/ce/cgvienna/eng/dbtyw/jdwt/crimelaw/t209043.htm>.

promulgated in 2006, empowers the administrative agencies of the fisheries and forestry departments to oversee the import and export of wildlife and maintain compliance with CITES.⁹⁴ This regulation prohibits the import or export of any wildlife prohibited by CITES except in cases such as “scientific research, domestication and propagation, artificial cultivation, and cultural exchange,” and for which a proper permit has been issued by the relevant department.⁹⁵ The law requires specific documentation for licensing, establishes the application process, and makes clear the rules for handling the products. Much as the Wildlife Law above, however, its vague exemptions leave potential loopholes open and may lead to inconsistent enforcement.

Law Enforcement: Successes and Failures

China’s laws, though far from perfect, provide a strong framework by which to monitor and prosecute wildlife crime. The reality on the ground, however, is more difficult to control. A combination of inconsistent enforcement and legal loopholes have contributed to a market that is much more unregulated in practice than on paper. Lack of funding and training for law enforcement has left agents ill-equipped to prevent the black market from infiltrating the legal wildlife trade. A problematic ivory registration and certification system has made it easy for unscrupulous traders to circumvent lax enforcement. In 1999, of 236 trafficking cases, only 15 people were detained and four sentenced.⁹⁶ Though progress has been made, only a small minority of trafficking cases are prosecuted and long prison sentences are rare.

⁹⁴ *The Regulation of the People’s Republic of China on the Administration of the Import and Export of Endangered Wild Fauna and Flora*. Order of The State Council of China No. 465 (2006). <http://english.customs.gov.cn/Statics/d30338b4-2f6a-47ea-a008-cff20ec0a6d2.html>.

⁹⁵ Ibid: Article 6.

⁹⁶ Li, “Enforcing Wildlife Protection in China.”

Prior to the ban, a problematic ivory certification system made differentiating between legal and illegal ivory difficult for consumers and enforcers alike, and allowed dishonest dealers to launder illegally obtained ivory into the legal market. In a series of investigations, NGOs EIA and the International Fund for Animal Welfare (IFAW) detailed the ways in which a large number of ivory processing and sales outlets have flouted national laws on proper licensing and certification procedures. Of the facilities surveyed by IFAW, 60 percent were found to be laundering illegal ivory and 63 percent did not display the certification for ivory products required by law.⁹⁷ In a survey of dealers in Guangzhou in Southern China, EIA found that as much as 90 percent of the ivory for sale came from illegal sources, and some sellers even shared information on how to smuggle ivory with their customers.⁹⁸ Under Chinese law, all ivory pieces of greater than 50 grams must be accompanied by a legal certificate and photograph of the product. Many of these certificates were either being reused for multiple different pieces, forged by the dealers, or absent altogether.

The online illegal market poses a particular challenge for law enforcement and conservation NGOs in China. As enforcement operations against brick-and-mortar ivory sellers have increased over the years, much of the black market has moved onto the growing number of online retail and social media platforms. Conducting business online, dealers have the benefit of relative secrecy and anonymity. The NGO Traffic has found that as much as 50 percent of the wildlife products sold illegally online in China are ivory and they are being advertised under at least 64 different code words to evade detection.⁹⁹

⁹⁷ Grace Gabriel et al. *Making a Killing*: 2.

⁹⁸ EIA. *Vanishing Point*: 29 - 30.

⁹⁹ Xiao Yu and Wang Jia. "Moving Targets: Tracking Online Sales of Illegal Wildlife Products in China." Traffic Briefing, February 2015. <http://static1.1.sqspcdn.com/static/f/157301/26245505/1432122394320/China-monitoring-report.pdf>.

In 2012, after law enforcement increased its crackdown on online sales and 15 of China's largest e-commerce companies pledged to remove all illegal wildlife listings, an increasing amount of this business moved onto social media platforms, making it even more difficult to track.¹⁰⁰ Between 2014 and the end of 2016, ivory postings increased to 63 percent of total wildlife products being sold through social media, while overall wildlife listings fell steadily over the same period.¹⁰¹ It is impossible to know, however, what percentage of the entire online market this sample represents or which traders continued to evade detection with a different set of code words or within restricted online communities. In a major positive move, in 2015 China's largest social media provider Tencent, with more than 650 million users, agreed to begin monitoring wildlife trafficking on its platforms.¹⁰² Aside from a few high profile cases, however, many of these online dealers escape criminal punishment only to begin selling again on a different site or under a different profile. Even with the revised wildlife law and its extension of criminal liability to e-commerce sites and couriers, comprehensive supervision and enforcement remain a daunting task for law enforcement in China, where everyday millions of online transactions take place.

Both in the interest of highly publicized operations and due to a lack of sufficient funding and staff for sustained efforts, one-off enforcement stings are effective less for their arrest count and more for their signaling power. Between 2014 and 2015, the SFA carried out three such operations, "Alarm Bell," which targeted ivory processors operating illegally, "Skynet" and "Swords," which focused on wildlife traffickers in

¹⁰⁰ Ibid.

¹⁰¹ Xiao Yu, Jing Guan, & Ling Xu. "Wildlife Cybercrime in China: E-Commerce and Social Media Monitoring in 2016." Traffic Briefing. May 2017. www.traffic.org/general-reports/Briefing-online%20wildlife%20trade-2016.pdf.

¹⁰² World Wildlife Fund for Nature, "Tencent and TRAFFIC to Fight Wildlife Crime Online," Accessed: 4 June 2017, <http://wwf.panda.org/?257039/Tencent-and-TRAFFIC-to-fight-wildlife-crime-online>.

general.¹⁰³ China also publically destroyed two ivory stockpiles during the same period, the first of 6.1 tons in 2014, and the second of 662 kg in 2015.¹⁰⁴ Major busts and subsequent publicizing through media reports and targeted advertisements is an effective way to educate the public of the criminality of the ivory trade as well as to discourage risk-averse potential offenders. Along with numerous advertisements in international airports across China, the SFA has announced it would send text messages to all international travelers detailing the legal implications of importing products such as elephant ivory and rhino horn.¹⁰⁵

In the international arena, China has made a concerted effort to collaborate with other nations and be seen as a leader on wildlife trafficking enforcement. It has signed a number of memorandums of understanding with its Southeast Asian neighbors and partners in Africa (see table below). Since 2013, China has taken a central role in all three

China's Wildlife Trafficking MOUs

Signatories	Agreement Type	Agreement Goals
China, ASEAN, ASEAN Wildlife Enforcement Network (WEN) (2004, 2009)	MOU on Combatting Wildlife Trafficking, MOU on Non-traditional Security Issues	Encourages information exchange, training and personnel exchange, law enforcement cooperation, joint research
China, Indonesia (2015)	MOU on Wildlife Trafficking	Increases collaboration on enforcement and increases legal trade of wildlife
China, Laos (2014, 2009)	MOU on cross-border conservation, MOU to establish Joint Border Commission	Conservation of cross-border nature preserves, joint patrols, annual meetings, community conservation training, etc.
China, Nepal	MOU on Environment and Biodiversity Conservation, focus on illicit trade in tiger parts	Aims to designate focal points for border checkpoints, increase information sharing, cooperation on seizures, increase surveillance on wildlife trade routes, supports establishment of local level anti-

¹⁰³ CITES Management Authority of China. "CITES SC66 National Ivory Action Plan Progress Report." Prepared for the 66th Meeting of the CITES Standing Committee, SC66 Doc. 9.

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

		poaching units
ASEAN, China, India, Japan, Korea, Russia, Australia, New Zealand (signed 2014)	East Asia Summit Declaration on Combating Wildlife Trafficking	Reaffirms commitments to international agreements (CITES, CBD), calls for: coordinated regional law enforcement, integration of national environmental and regional crime laws, standardization of regulations, exchanges of information, the development of national level taskforces and WENs with linkages to international networks
China, Vietnam (2015)	MOU on Wildlife Protection	Aims to enhance information sharing on trafficked wildlife between CITES management authorities, border law enforcement, captive breeding of species, and public awareness campaigns.
China, South Africa (2013)	MOU on Wetland and Desert Ecosystems and Wildlife Conservation	Aimed at ensuring compliance with relevant international conventions and increase law enforcement cooperation to control rhino poaching.
China, Kenya (2013)	MOU on Cooperation in the Fields of Forestry and Ecological Conservation	Emphasizes scientific exchanges and infrastructure development as well as provision of equipment and resources for on the ground conservation in Kenya.

The above list, though far from comprehensive, shows encouraging examples of China's willingness to cooperate with other countries and take a greater role in bilateral and multilateral institutions. Many of the agreements are strictly voluntary and lack the 'teeth' needed to ensure compliance among signatories. A worrying reoccurrence is a focus, again, on strengthening captive breeding programs and legal trade in wildlife, which can undercut efforts to combat illegal trade. These agreements are important first steps to establishing regular communication and information exchanges, but must be followed up in earnest with sustained efforts to control transnational wildlife crime.

Cobra operations, large-scale multilateral law enforcement stings organized through the International Consortium on Combating Wildlife Crime, CITES, and Interpol among other multilateral organizations. All three operations were hailed as successes. Operation Cobra II led to over 400 arrests and the seizure of three tons of ivory products.¹⁰⁶ The most recent, 2015's Operation Cobra III, tallied 139 arrests and 247 seizures of

¹⁰⁶ Xinhua Net, "China Leads Int'l Wildlife Crime Bust." *Xinhua*. Accessed: 4 June 2017, http://news.xinhuanet.com/english/china/2014-02/10/c_126104678.htm.

everything from ivory to endangered plant products.¹⁰⁷ The Chinese government seeks to present itself an international leader and, over the years, has taken a greater role in high-profile multilateral operations in areas such as law enforcement and peacekeeping. These relatively low-cost, one-off operations can help China improve its soft power standing in the world and build its reputation as an active player in international efforts. In recent years, China has also placed greater emphasis on establishing cross-border cooperation on counter-trafficking with its Southeast Asian neighbors, many of whom have much less regulated wildlife markets and with whom China shares long, porous borders. China has also participated actively in ASEAN environmental summits, regional action plans, and multilateral efforts—even though it does not have member status—in an attempt to take a greater role in leading Southeast Asian development and security.

In spite of recent efforts and what some might consider draconian legislation, environmental crime—and specifically wildlife crime—remains a relatively low priority amongst Chinese enforcement agencies. Lack of adequate funding for agencies and insufficient training for officers remain significant obstacles to effective enforcement.¹⁰⁸ Much of the burden of funding is left to regional and local governments, and those with greatest natural resources are often the most strapped for cash.¹⁰⁹ Even with the aforementioned regulations in place and a greater emphasis on controlling wildlife crime, it is estimated that as much as 90 percent of ivory purchased domestically in China is illegal.¹¹⁰ The burden on law enforcement, the rapid growth of an online black market,

¹⁰⁷ CITES. “Successful Operation Highlights Growing International Cooperation to Combat Wildlife Crime,” Press Release. Accessed: 4 June 2017. https://cites.org/eng/news/pr/iccwc_press_release_cobra_III.

¹⁰⁸ Ma Yan. “Protection of Natural Resource Law in China: The Legal Protection of Natural Resources and It’s Development in China under WTO Framework.” In *Environmental Law in Action: EU and China Perspectives*, pp. 163 - 187. Marina Timoteo, ed. Bologna, Bologna University Press. 2012.

¹⁰⁹ Peter Li. “Enforcing Wildlife Protection in China”: 84 - 85.

¹¹⁰ Matthew Carney, “Conservationists Cast Doubt on China’s Ivory Trade Ban.” *ABC News*, 6 April 2017. <http://www.abc.net.au/news/2017-04-06/conservationists-cast-doubt-on-chinas-ivory-trade-ban/8399992>.

and the legal loopholes in domestic policies facilitate the growth of a massive gray market for wildlife products. It still remains to be seen how the ban will affect the black market in China. The once legal trader might be driven underground, or conversely, marginal buyers now more acutely aware of the legal implications of purchasing ivory, may be dissuading from buying in the future. What is clear is that the announcement of the ban is merely the first step in a long process of shutting down the legal carving and sales industries, clamping down on online black markets, and educating the Chinese public on the legal and ethical implications of ivory consumption.

Central Government Policy: The Principal-Agent Problem

To understand the obstacles to policy implementation, one must understand the preceding policy developments in the context of the bureaucratic structure of the Chinese state. Principal-Agent Theory details how information asymmetries and conflicting incentives between central government and regional officials lead to inefficiency and, at times, willful disobedience at successive levels of government. An agent (local official), benefiting from information the principal (central government) lacks, will pursue his own interests at the cost of following central government mandates.¹¹¹ The theory describes any organizational system, from a multinational company to a government bureaucracy, but is particularly relevant to a rigidly hierarchical authoritarian state like China. In China's centralized system, a relatively small central government drafts vague policy mandates that are modified at each successive level of the bureaucracy down to local governments, which must also allocate the necessary budget resources. At each level, this 'fragmented authoritarianism' amplifies the principal-agent problems, allowing for

¹¹¹ Jean-Jacques Laffont & David Martimort, *The Theory of Incentives: The Principal-Agent Model*. Princeton University Press: 2001.

inefficiency and graft due to conflicting self-interests and policy goals.¹¹² This phenomenon is particularly worrisome for environmental initiatives, which are often sidelined for more measurable and politically expedient goals such as economic growth.¹¹³

As long as incentives to ignore central government policy outweigh the risks of noncompliance, local level officials will continue to pursue their own self-interests.¹¹⁴ One strategy available to a resource-strapped and understaffed central government has been periodic heavy-handed crackdowns on official corruption.¹¹⁵ This is meant to increase the cost of noncompliance to such an unacceptably high level in a few cases so as to dissuade future malfeasance. Some scholars view the Chinese government's indistinct legal boundaries and mixed signals as advantageous in controlling a vast bureaucracy through fear of harsh, unpredictable reprisals.¹¹⁶ However, the lack of independent courts or an independent authority tasked with monitoring and punishing corruption impedes consistent enforcement.¹¹⁷ Furthermore, acknowledging that there is corruption at any level of government tarnishes the Party as a whole and means these cases are likely to go underreported.¹¹⁸ More and more, the role of environmental watchdog has fallen to those outside government. Social sanctions imposed by non-

¹¹² Edward C. Banfield, "Corruption as a Feature of Governmental Organization," *The Journal of Law and Economics* 18, no. 3 (1975): pp. 587–605.

Andrew Wedeman, "Incompetence, Noise, and Fear in Central-Local Relations in China," *Studies in Comparative International Development* 35, no. 4 (2001): 59–83.

¹¹³ Joy Zhang & Michael Barr. *Green Politics in China: Environmental Governance and State Society Relations*. London: Pluto Press, 2013.

¹¹⁴ Wedeman: 71.

¹¹⁵ Ibid: 77.

¹¹⁶ Rachel E. Stern and Kevin J. O'Brien, "Politics at the Boundary: Mixed Signals and the Chinese State," *Modern China* 38, no. 2 (2012): 174–198.

¹¹⁷ Xuezhong Guo, "Controlling Corruption in the Party: China's Central Discipline Inspection Commission," *The China Quarterly* 219 (September 2014): 597–624.

¹¹⁸ Banfield: 593.

governmental organizations, journalists, and private citizens can help to reduce the incentives to illegal behavior and the under-provision public goods such as environmental protection.¹¹⁹

The Chinese Communist Party's continued survival rests on the regime's perceived legitimacy among its citizens and, to a lesser extent, the international community. Many of the incremental political and economic reforms begun in the 1980s and continuing to today can be understood in this frame. In the interest of maintaining social stability and advancing China's position in the world, the Party has shifted focus from the ideological campaigns of the Mao era to a growth-oriented planned economy under 'reform and opening up.' For much of the past 40 years, the key to that legitimacy lay in consistent and rapid economic development. That has expanded considerably over the last ten years to include all manner of social welfare and environmental issues as well. Largely in response to protests over increasing numbers of pollution-related environmental disasters, the central government has begun mandating 'hard' targets for provincial governments in pollution abatement and increasing penalties for noncompliance.¹²⁰ Interpretation and implementation of these general mandates, however, is left to the discretion of provincial and municipal offices of the Environmental Protection Bureau (EPB). In a system known as *tiao kuai*, local level EPBs are simultaneously beholden vertically to the provincial EPB and horizontally to their corresponding state authority, which may have a very different set of policy objectives

¹¹⁹ Duan Biggs et al., "Developing a Theory of Change for a Community-Based Response to Illegal Wildlife Trade: Illegal Wildlife Trade," *Conservation Biology* 31, no. 1 (February 2017): pp. 5–12.

¹²⁰ Alex Wang, "The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China," *The Harvard Environmental Law Review*, 37 (2013).

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2128167: 365 - 440.

and also controls the local EPB office's funding.¹²¹ Local level officials, whose career advancement is often decided by narrow economic targets, can be unmotivated to undertake costly environmental abatement projects because of a lack of short-term returns and a need to inflate growth figures.¹²² In the context of wildlife trafficking, local level officials have been found to flout national laws, as wildlife sales and captive breeding programs can increase GDP figures.¹²³ Conflicting incentives, official malfeasance, and difficulties in quantifying and monitoring environmental policy implementation have meant these efforts continue to take a back seat to boosting economic growth.

The principal-agent problem can, in theory, be addressed by restructuring incentives for local officials by better aligning them with central government policy. Rather than focusing predominantly on GDP growth figures, evaluations can be modified to reflect a more holistic assessment of a cadre's performance. Prior attempts to do this, such as the Chinese government's effort to build environmental costs into GDP growth figures, were abandoned because of a lack of political will and the unexpectedly high financial costs of environmental degradation.¹²⁴ Although the single figure "Green GDP" experiment failed, the willingness of Chinese officials at the highest levels to pioneer environmental accounting measures is significant. China's Environmental Protection Law was revised in 2014 to include an oversight and demerit system for officials who violate or fail to enforce environmental regulations within their jurisdictions,¹²⁵ but this system's

¹²¹ Hugo De Bergh & Zeng Rong. *China's Environment and China's Environmental Journalists*. Chicago, IL: Chicago University Press, 2011.

¹²² Peter Li. *Enforcing Wildlife Protection in China*: 88.

¹²³ *Ibid*: 91.

¹²⁴ Jason Rauch & Ying Chi. "The Plight of Green GDP in China." *Consilience: The Journal of Sustainable Development* Vol. 3 Iss. 1 (2010): pp. 102 – 116.

¹²⁵ "Environmental Law of the People's Republic of China." 8th Meeting of the Standing Committee of the Twelfth National People's Congress of the People's Republic of China. 24 April 2014. Translated by the EU

implementation varies regionally and is typically reserved for the most egregious pollution cases. What is needed is a more nuanced cadre evaluation method that takes into account a wider range of environmental and social metrics along with economic growth so that local officials have greater incentives to pursue environmental programs.

STRENGTHENING GRASSROOTS CONSERVATIONISM

The obstacles to successfully solving environmental crises in China, let alone reducing its growing global footprint, are daunting: environmental agencies that are underfunded, understaffed, and subject to competing policy agendas and conflicting incentives at the national and subnational levels, an exploding population with its associated pollution problems and resource shortages, and a rapidly growing middle class— already larger than that of the United States—that has yet to fully come to terms with their responsibilities as global citizens. These incentive issues and the shortfall in capacity, however, can be mediated by individuals and institutions affiliated with or completely outside the government. In recent years, the Communist Party has turned to its citizens, media, and civil society groups to be observers and reporters in the area of environmental protection.¹²⁶ The revised Environmental Protection Law allows private citizens to lodge official complaints of governmental negligence or corporate actions that lead to environmental damages and empowers registered non-governmental organizations to file legal suits for violations.¹²⁷ The NGO community, both international and domestic, has become an important ally to government in providing technical support and public outreach for environmental issues. Media's role as watchdog has been crucial in publicizing environmental crimes and providing a voice for disenfranchised victims and

– China Environmental Governance Programme. <https://www.chinadialogue.net/Environmental-Protection-Law-2014-eversion.pdf>.

¹²⁶ De Bergh & Rong: 19.

¹²⁷ “Environmental Law of the People’s Republic of China.”

concerned citizens. The Chinese government should continue to create an environment conducive to public participation and incentivize its citizens to take an active role in environmental protection both to increase its political legitimacy and to address shortfalls in capacity.

This necessitates a motivated polity mobilized around environmental issues. As scholars have pointed out, China has yet to develop a broad-based environmental movement and its citizens often do not associated environmental trends with their personal lives.¹²⁸ In many ways, the greater Chinese population has yet to understand their roles as global citizens. In order for a stronger sense of global conservationism to take hold in China, there is a very real need for citizens to re-imagine their community as something not defined by national boundaries, but by shared values as well a complex relationship to the land and its creatures. Zhang and Barr identify a need for citizens to establish “trans-local” networks built around common issues and reduce over-reliance on the state as the sole answer to their problems.¹²⁹ Greater agency among citizens as overseers of their environment has been slow to develop in China, however. Consumers, likewise, must deepen their understanding of the products they consume and the processes and environmental costs involved in harvesting, manufacturing and shipping those products to them. The role of information cannot be under-estimated. At the same time, however, particular care must be given to how the public is educated and how the messages they receive are interpreted within a unique cultural and historical frame.

Past Conservation Campaigns

The conservation narrative in China, especially regarding wildlife trafficking, has traditionally been dominated by international NGOs and is therefore driven by liberal,

¹²⁸ Zhang Michael Barr. *Green Politics in China*.

¹²⁹ Ibid: 89.

western ideals of environmental protection. On its face, there is nothing wrong with attempting to spread these ideals to different cultures and societies, but these efforts can, at times, meet with unintended consequences. In contrast to many Western countries, where conservationism has gestated for decades, China has only recently been exposed to these ideas. NGOs should not take Western sensibilities for granted when developing campaigns for Asian audiences. Furthermore, largely in response to what is perceived as ideological incursion, a growing group of Chinese skeptics have decried many NGO campaigns as yet another example of “the political and technical hegemony” of the West.¹³⁰ Although it is unlikely that most Chinese take such a hostile view of these public awareness campaigns, the different cultural and historical frames through which they are interpreted must not be overlooked. More importantly, the particular people these campaigns seek to target—past and potential consumers—are likely to respond defensively to what they see as foreign criticism and moralizing over their behavior. The following section summarizes a number of these campaigns and provides options for improving future efforts.

Campaigns to reduce demand for ivory in Asia have traditionally used messaging centered on the negative environmental and human impacts of poaching and the illegal ivory trade. “Say No to Ivory,” a 2013 campaign begun by WildAid, Save the Elephants, and the African Wildlife Fund, uses widely recognized celebrity ambassadors to spread messaging to Chinese audiences about the ivory trade through a variety of media including television, print advertisements, social media outlets, and public service announcements.¹³¹ Part of the campaign also includes an online pledge to refrain from

¹³⁰ Zhang & Barr. *Green Politics in China*: 19.

¹³¹ African Wildlife Foundation, “Say No Campaign: A Demand Reduction Campaign in Asia,” 4 November 2013, <https://www.awf.org/projects/say-no-campaign>.

any future consumption of ivory and spread information about elephant poaching to friends and family. A survey of urban residents two years following the outset of campaign showed significant positive attitudinal changes, including a 51.5% increase in general awareness of elephant poaching and a 110.7% increase in the understanding that ivory comes from poached elephants among Beijing residents.¹³² Although it is impossible to assess how much of this attitudinal change is due to this specific campaign, greater coverage of elephant poaching in the Chinese news media and increased efforts devoted to public information campaigns by conservation organizations are having a noticeable effect, especially among urban Chinese residents. IFAW ran similar campaigns targeting ivory gifting culture in China as well as one ad depicting an elephant calf saying “Mom, I have teeth,” playing off the Chinese word for ivory ‘xiangya’ (‘elephant tooth’), an attempt to dispel the common misconception among Chinese that elephants simply lose their tusks naturally.¹³³

Another approach is to educate potential consumers about the laws surrounding wildlife trafficking and the potential legal risks a consumer incurs purchasing wildlife products. Two campaigns, the International Fund for Animal Welfare’s “Think Twice” campaign, and Traffic’s “Our Life our Wildlife—What is CITES?” program sought to specifically target international travelers most likely to come in contact with illegal wildlife products and educate them on CITES and unsustainable wildlife consumption.¹³⁴ The Chinese SFA has also issued public service announcements to international travelers

¹³² WildAid, “Ivory Demand in China 2012-2014,” accessed: 12 May 2017, http://www.wildaid.org/sites/default/files/resources/Print_Ivory%20Report_Final_v3.pdf

¹³³ Grace Gabriel, “With a New Year in China Comes a New Campaign,” IFAW - International Fund for Animal Welfare, 30 January 2014, <http://www.ifaw.org/united-states/news/new-year-china-comes-new-campaign>.

¹³⁴ Elsayed Mohamed, “Think Twice campaign lands at Dubai International Airport,” IFAW. 5 January 2012. <http://www.ifaw.org/united-states/news/think-twice-campaign-lands-dubai-international-airport>.
 —TRAFFIC. “Awareness Raising” <http://www.traffic.org/campaigns/>, accessed: 12 May 2017.

to inform them of the legal liability of returning to China with ivory or other wildlife products. Lishu Li of WCS China feels that even greater effort must be devoted by Chinese transnational companies, especially those operating in Africa, to educate their employees and discourage them from engaging in wildlife trafficking.¹³⁵ Finally, developing specific awareness campaigns that focus on the recent ban and the specific legal risks associated with purchasing or selling ivory is essential. The following survey section shows that awareness, especially on policies and laws regulating the domestic ivory market, is still limited and strongly correlated with ivory consumption.

A third strategy attempts to avoid stigmatizing consumers by focusing on the ‘positive’ aspects of wildlife consumption in by addressing the source of the desire for products like ivory and rhino horn and the importance of these animals in Asian cultures. “The Power of Chi” campaign, led by WWF, TRAFFIC, the marketing organization PSI avoids using the common images of butchered rhinos to rouse feelings of guilt or shame in consumers.¹³⁶ This more culturally sensitive approach relies on the use of traditional values and symbols to dissuade consumption. Powdered rhino horn is reputed to increase virility in men, strengthen the flow of ‘chi’ within the body, and even fight cancer in Vietnam. This campaign’s message focuses on persuading wealthier men that the strength of their ‘chi’ is inborn and cannot be increased by consuming wildlife products. Rather than a moralizing message about the evils on the rhino trade, this message calls on men to find confidence and strength within themselves, rather than from some magic tonic. Another campaign in Vietnam by Humane Society International also uses online social networks, businesses, and community organizations to disseminate messages about the

¹³⁵ Lishu Li. Interview by author. In-person interview. Guangzhou, China, 21 February 2017.

¹³⁶ WWF. “Novel Chi Campaign Launched in Viet Nam on World Rhino Day Aims to Reduce Demand for Rhino Horn,” 22 September 2014. <http://www.wwf.org.za/?12061/Chi-campaign-launch>.

illegality of rhino horn and its lack of medicinal properties.¹³⁷ In Thailand, one of the fastest growing ivory markets in Asia, WWF's "Chor Chang" campaign called on celebrities and opinion leaders to drop Thai letter 'chor' from their names—also the first letter in the word for elephant, 'chang'—in a gesture of solidarity with the world's disappearing elephants.¹³⁸ Rather than stigmatize consumers with gruesome imagery, this campaign focused on the importance of the elephant as a cultural symbol in Thailand.

The success of any one of these campaigns in isolation is difficult to assess. The diversity of backgrounds and personal values among different ivory consumers even within the same community means that individuals may have vastly different reactions to the same campaign. To the extent possible, campaigns must be targeted to demographic groups based on previous exposure and the cultural and social motives for consumption. In the first phase, information campaigns that seek to educate the general population about the negative aspects of poaching, the ivory trade, and its illegality are necessary as a basis for demand reduction. It is safe to say that NGOs in China have achieved considerable success on this stage, at least among wealthier urban residents, those most likely to be ivory consumers. The crucial next stage must focus on the motives of consumption. Continued negative reinforcement may be insufficient to sway consumers who do not identify personally with moral arguments about poaching or the loss of biodiversity in Africa. Thought leaders, especially those recruited from the art collector community and among past ivory consumers, are likely to have developed networks of potential buyers and greater capacity to influence those individuals. To this end, WildAid has recruited a prominent Beijing antique dealer as its ambassador to the city's elite

¹³⁷ Human Society International, "Demand for Rhino Horn Reduced, Says Poll," October 2014. <http://www.hsi.org/assets/pdfs/vietnam-rhino-horn-demand-poll.pdf>.

¹³⁸ WWF, "Chor Chang campaign raises support for elephants," 5 March 2015, <http://wwf.panda.org/?240750/Chor-Chang-campaign-raises-support-for-elephants>.

collectors for ivory demand reduction.¹³⁹ Additionally, a successful campaign should present a clear, simple fact and an actionable message to its audience, constantly reinforced through networks of opinion leaders.¹⁴⁰ Empowering audiences to take an active role in conservation through trusted local figures is a strategy that both non-consumers motivated by conservation and consumers seeking to square past behavior with their consciences can engage in positively. Identifying those key consumer groups and motivating action on conservation will be addressed in the third section of this report.

The Role of Civil Society

NGOs, journalists, and private citizens are much more than merely information disseminators. Professional organizations and academic institutions can provide much needed technical expertise and compensate for a lack of capacity in government agencies. Journalists and private citizens can actively monitor and publicize infractions of wildlife laws, creating a bridge between government and civil society built around cooperation and greater transparency. Research has shown that the Chinese people view greater inclusion of civil society groups in the public sector as increasing transparency and representativeness of environmental policies.¹⁴¹ The National Geographic Society and Globescan survey showed that respondents found non-profit organizations (80%) and scientists and academics (79%) to be the two most trusted sources of information on ivory issues.¹⁴² This trust, along with greater collaboration between non-governmental groups and government agencies, can help to bolster faith in the central government's

¹³⁹ Ma Jiangnan, WildAid China. Interview by author. In-person interview. Guangzhou, China, 22 February 2017.

¹⁴⁰ Ibid.

¹⁴¹ Thomas Bernauer et al., "Could More Civil Society Involvement Increase Public Support for Climate Policy-Making? Evidence from a Survey Experiment in China," *Global Environmental Change* 40, September 2016; pp. 1–12.

¹⁴² National Geographic & Globescan. *Reducing Demand for Ivory*: 20.

capacity and willingness to address environmental issues, which is generally viewed poorly.¹⁴³

The bureaucratic difficulties of establishing NGOs and their limited independence from the government present serious obstacles to operation in China. A restrictive foreign NGO law that came into effect in January 2017 put in place strict controls on foreign funding and mandates all foreign NGOs submit annual reports and register with police bureaus.¹⁴⁴ Registering NGOs requires adhering to a long list of restrictive regulations, obtaining government sponsorship, and limiting the type of and manner in which information is released publically.¹⁴⁵ This is why many groups still operate in a tenuous, unofficial capacity, which under the new law has become even more difficult. These organizations are also hampered by a need to remain politically neutral and avoid certain strict taboos so as not to fall afoul of the government. Even this is not as straightforward as it may seem. Vague notions of ‘national security’ can be invoked to deny or revoke an organization’s registration. The government’s ambiguous signaling and mixed messaging can be seen as a “low-cost way to contain dissent, gather information, and keep options open,” without taking definite positions on specific policy issues.¹⁴⁶ These restrictive new policies are viewed by many in the NGO community as a crackdown on foreign influence that undermines the authority of the Communist Party.

While these obstacles have made advocacy on certain social issues such as freedom of the press and speech nearly impossible, many ENGOs have operated in China by positioning themselves as government allies and valued sources of technical assistance

¹⁴³ Ibid: 19.

¹⁴⁴ Zheping Huang, “NGOs Are under Threat in China’s Latest Crackdown against ‘foreign Forces,’” *Quartz*, 4 January 2017, <https://qz.com/873489/ngos-are-trying-to-stay-alive-in-chinas-latest-crackdown-against-foreign-forces/>.

¹⁴⁵ De Bergh & Rong: 22.

¹⁴⁶ Stern & O’Brien. “Politics at the Boundary”: 174.

and public outreach. To this end, organizations such as WCS are committed to building stronger relationships with government agencies and providing resources and technical expertise to facilitate cross-border customs enforcement training and collaboration.¹⁴⁷ This value-added, capacity building approach is viewed as necessary to establishing strong relationships between NGOs and the Chinese government.¹⁴⁸ Fostering relationships, or *guanxi*, with agency officials is also critical to drawing the government's attention to key issues and moving policy at higher levels of government. NGOs that position themselves as a critical service providers for state agencies and that share government policy goals are more likely to succeed and even benefit from government support.

Increasingly, journalists and independent citizens have adopted the role of environmental overseers by publicizing instances of official and corporate negligence, but the lack of an independent press and the arbitrary detention of journalists and activists persists in China. Across a range of country studies, press freedom is shown to be a key factor in reducing official corruption, due to an independent media's capacity to publicize such corruption and to apply consistent pressure on the government to detect and punish these crimes.¹⁴⁹ Independent investigative journalism can reduce information asymmetries between different levels of the bureaucracy and the public as well as diminish an agent's incentives for corruptions.¹⁵⁰ In China, the Internet has become the preferred medium for rapidly and widely disseminating public interest stories faster than

¹⁴⁷ Lishu Li. Interview by author.

¹⁴⁸ Reza Hasmath and Jennifer Y.J. Hsu, "Isomorphic Pressures, Epistemic Communities and State-NGO Collaboration in China," *The China Quarterly* 220, December 2014: 946.

¹⁴⁹ Jeffrey B. Nugent. "Detecting Corruption and Some Methods to Control it: Some Lessons from Mena," in *Understanding the Political Economy of the Arab Uprisings*, ed. Ishac Diwan, World Scientific Publishing, Singapore (2014): pp. 131 - 164.

¹⁵⁰ *Ibid*: 153.

censors can shut them down, often leaving the government no choice but to act. Public outrage generated both within and outside of China regarding the city of Yulin's annual dog meat festival has exerted significant pressure on Chinese officials to ban the trade in dog meat in China.¹⁵¹ Outcry among China's 'netizens' generated by posts on social media of private citizens and public officials bragging about eating the endangered pangolin spurred subsequent investigations and arrests.¹⁵² Largely due to increased public outcry, in 2012 the Chinese government banned shark fin soup at official banquets in an attempt to crack down on official extravagance, another win for conservationists.¹⁵³

In areas like environmental protection, the government has increasingly turned to its citizens for support in monitoring and reporting crimes. China's State Forestry Agency has commended people who provide its social media accounts with actionable information on illegal wildlife consumption, stating that these concerned citizens' reports have contributed to the enforcement of China's Wildlife Protection Law.¹⁵⁴ In 2013, a firsthand account of elephant poaching in Africa by a journalist from Guangdong Province's *Southern Weekend* generated millions of views and thousands of comments

¹⁵¹ Stuart Winter, "Dog Butchering Festival: 2 Million Urge for Sick Event to end but Will China Listen?," *Express*, May 26, 2016, <http://www.express.co.uk/pictures/pics/2864/Campaigners-against-Yulin-s-dog-meat-festival-China-pictures>.

¹⁵² Neil Connor, "'In Love with the Taste of Wildlife' – Probe Launched after Officials Hold 'Endangered Pangolin Feast' in China," *The Telegraph*, 7 February 2017, <http://www.telegraph.co.uk/news/2017/02/07/love-taste-wildlife-probe-launched-officials-hold-endangered/>.

Neil Connor, "'Pangolin Princess' Detained in China after Posting Images Online of Cooked Wildlife," *The Telegraph*, 14 February 2017, <http://www.telegraph.co.uk/news/2017/02/14/pangolin-princess-detained-china-posting-images-online-cooked/>.

¹⁵³ Bettina Wassener, "China Says No More Shark Fin Soup at State Banquets," *The New York Times*, 3 July 2012, <https://www.nytimes.com/2012/07/04/world/asia/china-says-no-more-shark-fin-soup-at-state-banquets.html>.

¹⁵⁴ Su Zhou, "Netizens Help Enforce Wildlife Protection Law," *China Daily*, 3 March 2017, http://www.chinadaily.com.cn/china/2017-03/31/content_28750719.htm.

across Chinese social media.¹⁵⁵ Although international media is well positioned to spread these messages, homegrown journalism and online activism is essential if China is to develop its own environmental movement. Conservationism cannot be imposed from outside, it must come from within, with Chinese voices leading the call.

For the last three decades, the social contract between the Chinese people and the government has been one of sustained economic growth in exchange for political legitimacy. With a slowing economy and an unprecedented level of environmental degradation affecting everything from air quality to food scarcity, it is in the interest of both parties to redefine that contract for today's economic and environmental context. Consistent grassroots pressure is necessary to shift high-level policy. Though young, the environmental movement in China is quickly growing. Since 1990, the number of animal protection and conservation organizations has increased from essentially none to over 200 today.¹⁵⁶ Young, urban Chinese are more likely to be aware of global environmental issues and to be active supporters of conservation efforts. They must continue to do more to hold policymakers at the highest level accountable for the high environmental costs of China's development. In order to influence policy in China, they must also further integrate into the global conservation network through regular interaction with international environmental organizations and concerned citizens around the world.

¹⁵⁵ Elephant Action League, "Story on Ivory in Chinese Paper Goes Viral," 21 December 2013, <https://www.elephantleague.org/project/story-on-the-chinese-paper-southern-weekly-on-elephant-poaching-goes-viral/>.

¹⁵⁶ Rachael Bale. "Chinese Youth Embrace New Attitudes Toward Pets and Wildlife," *National Geographic News*, 12 July 2017, <http://news.nationalgeographic.com/2017/07/wildlife-watch-china-changing-animal-protection/>.

III: Ivory Demand Survey Results

STUDY INTRODUCTION

There is widespread consensus that demand reduction must be a central focus for eliminating the ivory trade over the long term, as it is clear that command and control policies and supply-side enforcement alone are insufficient. As long as a taste for ivory remains among potential consumers and its legality remains inconsistent across state lines, gray and black markets will persist. In keeping with this, academic researchers and non-profit organizations are attempting a more nuanced approach to understanding the determinants of demand for ivory and other wildlife products. Surveys and research by organizations such as WWF and National Geographic have begun to shed greater light on how deep-rooted demand is and how a stronger foundation in specific cultural, economic, and psychosocial aspects of illicit consumption is needed if a comprehensive demand reduction strategy is to be found.¹⁵⁷

This survey, designed in 2015 by Dr. Joshua Busby of the L.B.J. School of Public Affairs and myself, and conducted with the assistance of an online survey company, attempts to shed some light on how potential consumers of ivory products react to specific normative messaging. The focus was less on how widespread ivory consumption was in China and more on how to shift consumption attitudes with targeted information campaigns. How does conservation messaging modify consumers' responses to questions about personal behavior and attitudes? What are the stigmas associated with ivory consumption? How do people perceive the social and environmental impacts of their consumption behavior, and how—if it all—do they think this behavior should be

¹⁵⁷ National Geographic and Globescan. *Reducing Demand for Ivory: An International Study*. Lertzman, Renee. *Reducing Desire for Ivory: A Psycho-social Guide to Address Ivory Consumption*.

regulated? Our survey sample is divided into four treatment groups, each receiving a different message: a control group with no message, a criminal ‘punishment’ group, an ‘elephants suffer’ group, and a ‘people suffer’ group. Each treatment, in the form of a news story and corresponding photo, was meant to present one negative aspect of the global illicit trade in ivory. Each ‘news story’ (a brief paragraph) begins the same way and ends with one or two sentences that depict each of the different treatments.¹⁵⁸

Based on results from previous surveys as well as prior qualitative research on demand discussed in the first section, a theory was formulated on the impacts of the treatments and other demographic and attitudinal variables on respondents’ willingness to admit their intent to buy ivory or their having purchased it in the past. Dr. Busby and I speculated that each of the treatments would reduce willingness to admit purchasing ivory relative to the control group, and that the ‘punish’ treatment might have the strongest effect, given the harsh penalties for ivory trafficking crimes and the tendency for Chinese citizens to look to the government for social guidance. We believed weakly embedded environmental values and limited exposure to conservation campaigns across demographic groups would render the ‘elephants suffer’ and ‘people suffer’ treatments less effective. Additionally, although previous surveys describe knowledge of elephant well-being and population trends as not having a major effective on buyer attitudes, we felt accurate knowledge of elephants and the ivory trade would have a significant negative impact on stated intent to buy ivory. Furthermore, we expected an accurate understanding of the legal status of ivory in China would have a similar effect, as those unaware of the mixture of illegal and legal ivory and relevant regulations would have less reason to hide their past or intended purchases. We hypothesized that those who receive a

¹⁵⁸ The treatments with photos can be found in the Appendix (pp. 94 – 97).

treatment will report having purchased or intending to purchase ivory at significantly lower rates compared to the control group. We expect these effects to be more significant among younger, more educated, middle class respondents, which previous studies have shown are more informed and susceptible to conservation messaging.

SURVEY METHODOLOGY

Survey Sample

In lieu of a comprehensive population-wide survey or in depth qualitative research, our approach was to better understand how potential consumers respond to anti-ivory messaging with a targeted experiment. Rather than collecting descriptive statistics on a notoriously elusive demand group, we subjected a large sample of more than 1,300 Chinese internet users to a set of treatments geared towards modifying ivory consumption behavior in order to better understand which messages are more effective. Respondents were not randomly sampled, but volunteered to complete an online survey about ‘international issues’ in exchange for a small payment. It should be understood, therefore, that this is a sample of convenience and is by no means indicative of the general Chinese population. Only those who had access to the Internet would be able to complete the survey. This sample, therefore, likely favors wealthier and more educated urban residents.¹⁵⁹ For the sake of comparative analysis, the survey was repeated on a second sample of 841 men to see if the results of the experimental survey could be replicated. Each of the respondents was randomly assigned to one of the treatment groups, which controls for demographic variability within each subsample. Although we are unable to

¹⁵⁹ The average yearly salary in Chinese cities in 2015 was around 62,000 RMB. In our sample, only 17.2% of respondents reported making less than 150,000 RMB per year. Although we can’t assume perfect reporting, this is a stark difference from national averages. The rate of people with a bachelor’s degree or more was likewise much lower in the general population than reported in our survey.

generalize to the wider Chinese population, this method allows us to isolate the treatment effect and minimize the effect of confounding factors.

Survey Details & Implementation

The treatments consisted of a mock news story and corresponding photo depicting one particular negative aspect of the ivory trade. The first group was a control (henceforth referred to as “control”) and received no news story or photo. Group two (referred to as the “punish” treatment group) received an article describing the legal status of ivory in China and a particular case of prosecution against Chinese citizens for ivory trafficking. The photo depicts Forestry Police officers around a table of confiscated ivory products. Group three (henceforth referred to as the “elephants suffer” treatment group) received a paragraph discussing the decline in African elephant populations and China’s responsibility in ending the trade. The photo shows pallets of raw ivory. The final treatment (referred to as the “people suffer” treatment group) describes Chinese demand for ivory as potentially fueling violent conflict in Africa by funding militant groups. The photo depicts heavily armed African soldiers surrounding the remains of an elephant.

The specific treatment messages were selected not only because they are representative of the impacts and consequences of the ivory trade, but also because they focus on themes heavily covered by western conservation NGOs in their information campaigns across Asia. It is important to assess the overall efficacy of these campaign strategies by testing how people modify their responses to questions based on which treatment they receive. The hope is that these results may help future campaigns tailor messages to specific audiences or avoid messages that do not have the intended effect. Statistically significant effects of treatments on stated intent to buy ivory due to one-time

messaging can be interpreted to be the result of a powerful signaling medium, but they must be taken with a grain of salt. High significance values only describe a correlation, and are not proof of a causal relationship between treatment and stated intent to purchase ivory. Most importantly, we must remember that stated intent cannot be interpreted as an accurate proxy for demand. Respondents may be hiding their actual purchase histories because of feelings of guilt or shame stirred by the messaging they received. It is also beyond the scope of this study to understand how a negative message might reinforce negative behavior, rather than reduce it. Finally, we cannot be sure how long a change in attitude will endure after the survey is complete. As any advertiser knows, a message must be constantly reinforced in order to have a prolonged effect on consumption behavior. Repeating a treatment that has a significant one-off effect on how subjects respond can potentially deepen its impact. Conversely, some messaging may be ineffectual beyond a certain number of exposures as subjects' knowledge deepen and they become more accustomed to the imagery.

The first part of the questionnaire covers general attitudinal issues, consumption habits, and preferences for non-wildlife products such as groceries and non-specific luxury items. Other aspects covered were attitudes towards food quality and safety, foreign versus domestic products, and perceived medicinal properties of certain non-ivory wildlife products. The next section covers general knowledge of ivory, from origin countries to how it is harvested, the perceptions of its legal status, risks to consumers of purchasing ivory, and its availability in the Chinese domestic market. Several questions attempt to address the how respondents perceive the value of ivory. Additionally, a series of questions are asked about whether the respondent has given or received or knows anyone who has given or received ivory in the past along with which type of ivory products and the reasons for gifting. A more in depth line of questioning follows

attempting assess the perceived incentives and disincentives for purchasing ivory and both the government's and the consumer's responsibilities regarding the illegal markets.

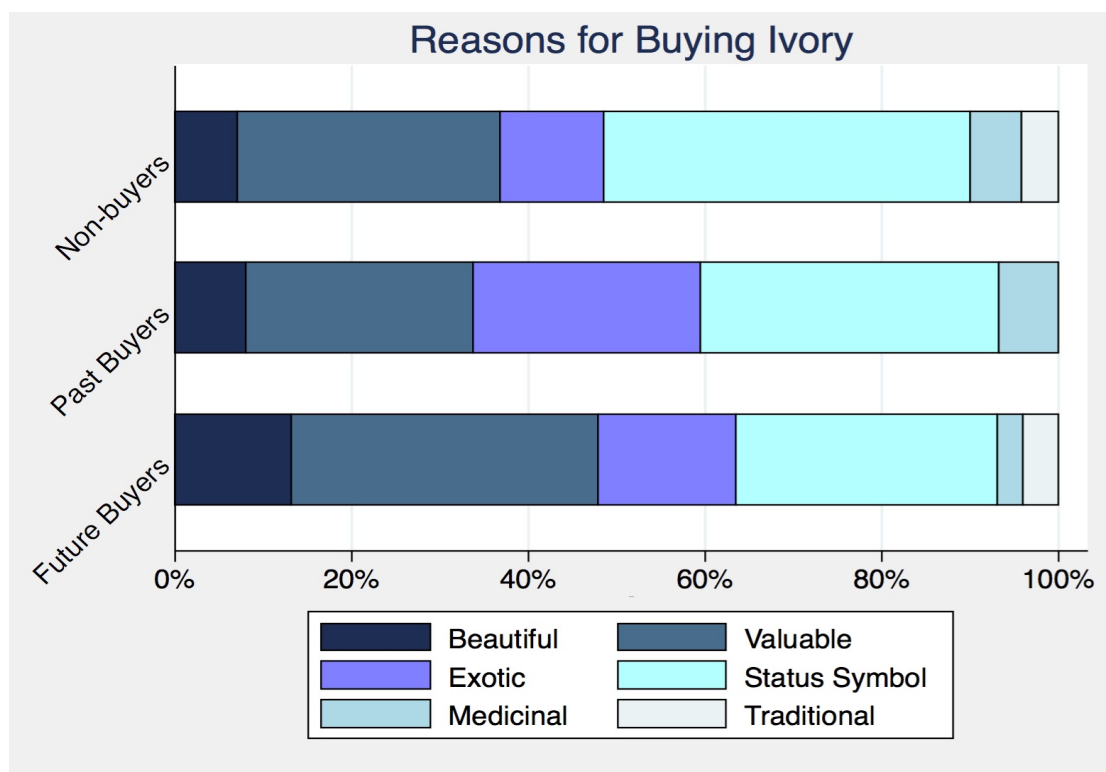
The final two sections of the survey revolve around political behavior and general demographic questions. The demographic questions cover, age, income, gender, educational, political affiliation, employment, province of residence, and many other aspects. The political behavior section asks if respondents would be willing to become involved in public campaigns to address illicit trafficking. Respondents were asked if they would write letters, sign petitions, talk to family and friends about illegal ivory, and so on. They are then asked to enter their names in an online petition as a sign of commitment to stop buying ivory products.

Tabulations & Descriptive Statistics

The following sections covers some of the more informative tabulations assessing attitudes towards ivory, consumption intent, and general knowledge of the ivory trade and the legal status of ivory in China. Of our survey respondents, 15.7% stated they had purchased ivory in the past, planned to in the future, or both, 10.9% planned to in the future, and 4.8% had in the past but did not plan on buying again in the future. In the men-only sample, 17.6% were past or future ivory consumers, and 12.6% stated they would likely buy in the future. The latter category was of particular interest in better understanding how consumer preferences might change and for what reasons. Between buyers and non-buyers, the valuation of ivory varied somewhat (view graph below). Future buyers tended to view the financial value of ivory (34.7%) as the most important reasons to purchase ivory, while non-buyers and past buyers tended to weigh the perceived status derived from ivory (41.4% and 33.8%, respectively) as a more important quality. Aesthetic value, while relatively low in both groups, was almost twice as

important among future buyers than the other two categories (13.3% to 7.6%). Results of chi-squared test were statistically significant at the 1% level ($\chi^2 = 31.98$, p-value = 0.000), meaning there is less than a 0.1% likelihood of these results occurring due to random chance. Responses varied little between treatments and control, implying that the messaging had no significant effect on respondents' valuation of ivory.

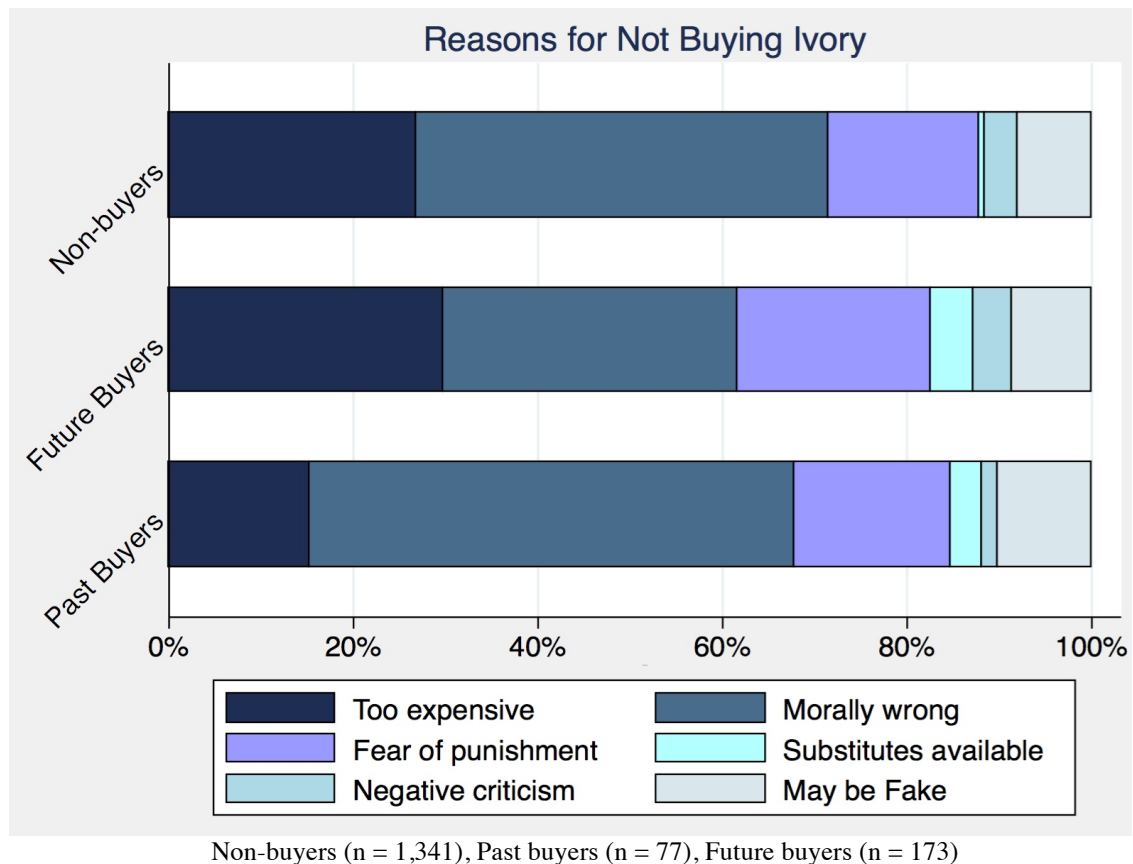
Respondents' Reasons for Buying Ivory



Reasons for not buying ivory varied somewhat between the three groups. Future buyers were the least likely to view purchasing ivory as morally wrong. If purchased as a gift, the majority of respondents in both groups said they would keep ivory for its aesthetic value (buyers 59% and non-buyers 63.2%). The below graph shows that moral opposition to the purchase ivory was the number one stated reason among non-buyers (44.6%) and (only) past buyers for not buying ivory (52.5%) ($\chi^2 = 29.09$, p-score =

0.001). Price was a large disincentive among future buyers (29.7%), and among non-buyers (26.7%), implying that falling prices might lead some marginal consumers to purchase ivory.

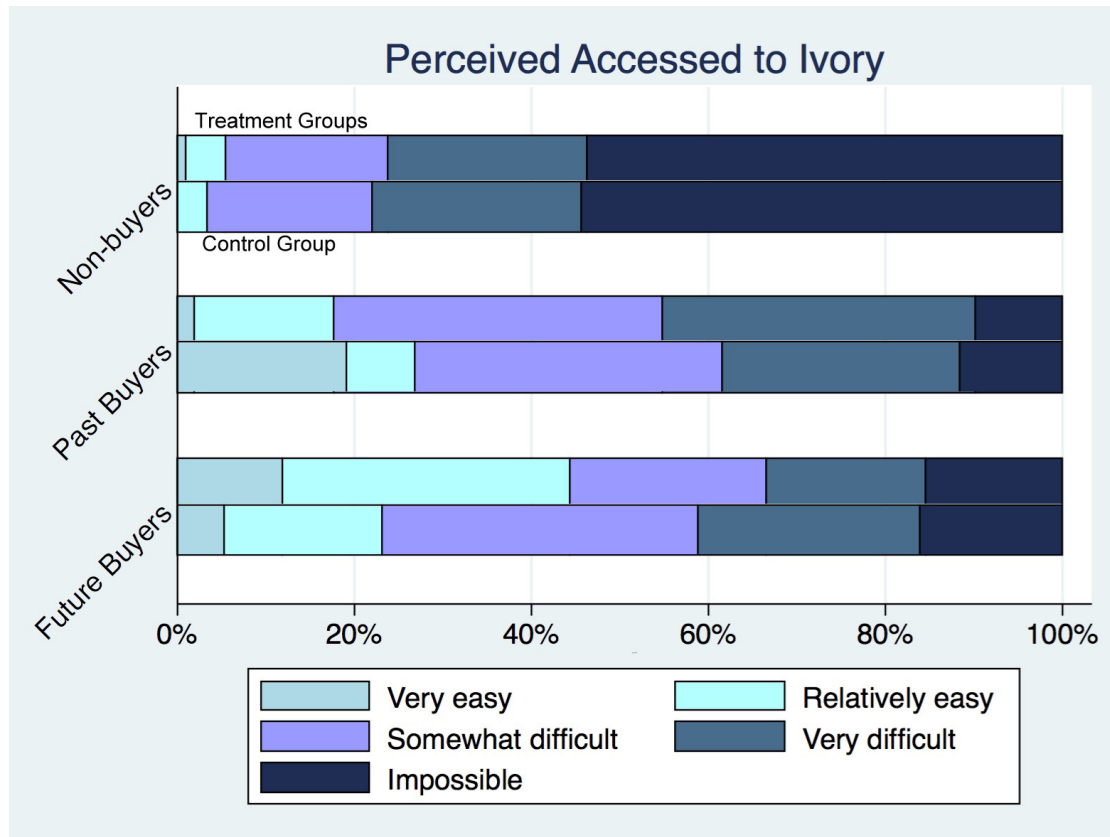
Respondents' Reasons for Not Buying Ivory



Non-buyers in both the control and treatment groups were much more likely to state they believed ivory to be impossible to obtain (53.9%), while only 10.4% of past buyers and 15.6% of future buyers made this claim ($\chi^2 = 264.1$, p-score = 0.000). Past buyers who received a treatment were much less likely to report that ivory was very easy to find than those in the control group (this could be partly due to the smaller sample size

of n = 77). This effect, strangely, was reversed in the future buyers group, who, if treated, were more likely to say ivory was easy to find.

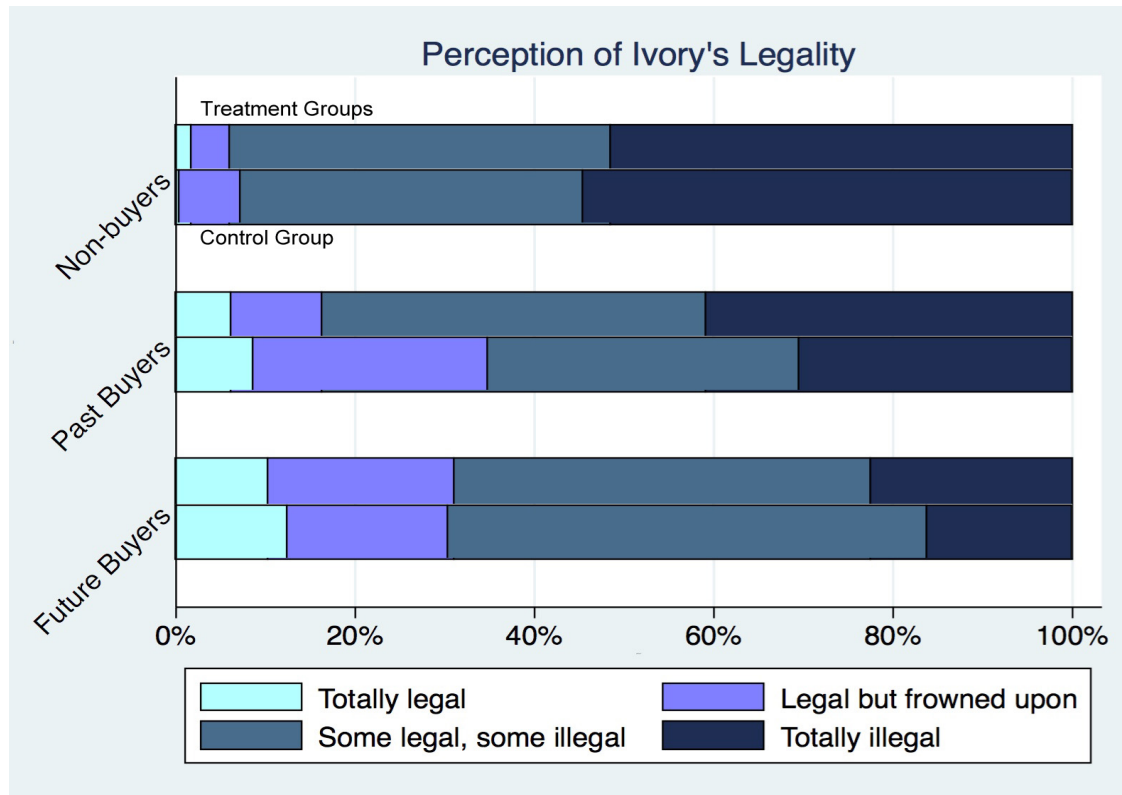
Perceived Ease of Access to Ivory Among Buyers and Non-buyers



Perception of legality was a third area where variation between buyers and non-buyers proved significant ($\chi^2 = 136.6$, p-score = 0.000). The below graph shows that non-buyers were much more likely to believe ivory was completely illegal (52.2%), whereas just 20.3% of those intending to purchase in the future believed this. 37.5% of respondents who bought ivory in the past but did not plan on buying again believed ivory to be completely illegal. These results were found to be consistent in the second sample as well. It is possible that the legal status of ivory played a large role in their decision not

to purchase ivory again. The data also shows that accurate knowledge of ivory's legal status at the time of the survey (some legal, some illegal) was fairly consistent, regardless

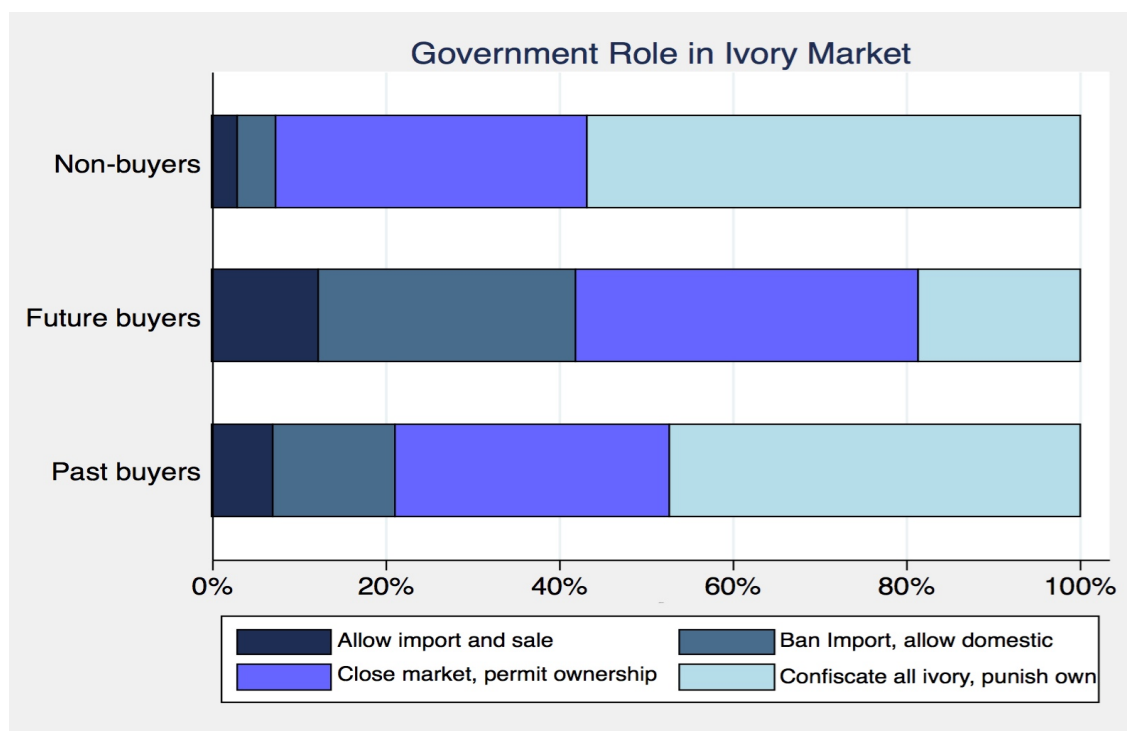
Perception of Ivory's Legal Status Among Buyers and Non-buyers



of intent to buy, with future buyers having a slightly better understanding of ivory's ambiguous legality. Again, we see treatment has only a small effect on responses between buyer groups, the most notable being among the past buyers, who were more likely to answer that ivory was somewhat or totally illegal if they received a treatment. This could be the result of the messaging reinforcing a pre-existing belief that ivory is illegal or unethical in past buyers with no stated intent to buy again. The numbers in the second men-only survey were fairly consistent with these results.

The perceived role of the government in ensuring that the illegal ivory market be controlled varied substantially and significantly between buyers and non-buyers ($\chi^2 = 189.10$, p-score = 0.000). A large majority of non-buyers and past buyers (56.9% and 47.1%) claimed to support a total ban and confiscation, while only 18.6% of future buyers did. Closing the domestic market and permitting ownership had consistent support across all categories (average of 36.2%). These results are consistent with numbers from the second survey sample and varied only slightly when divided between treatment groups and the control group (not shown here).

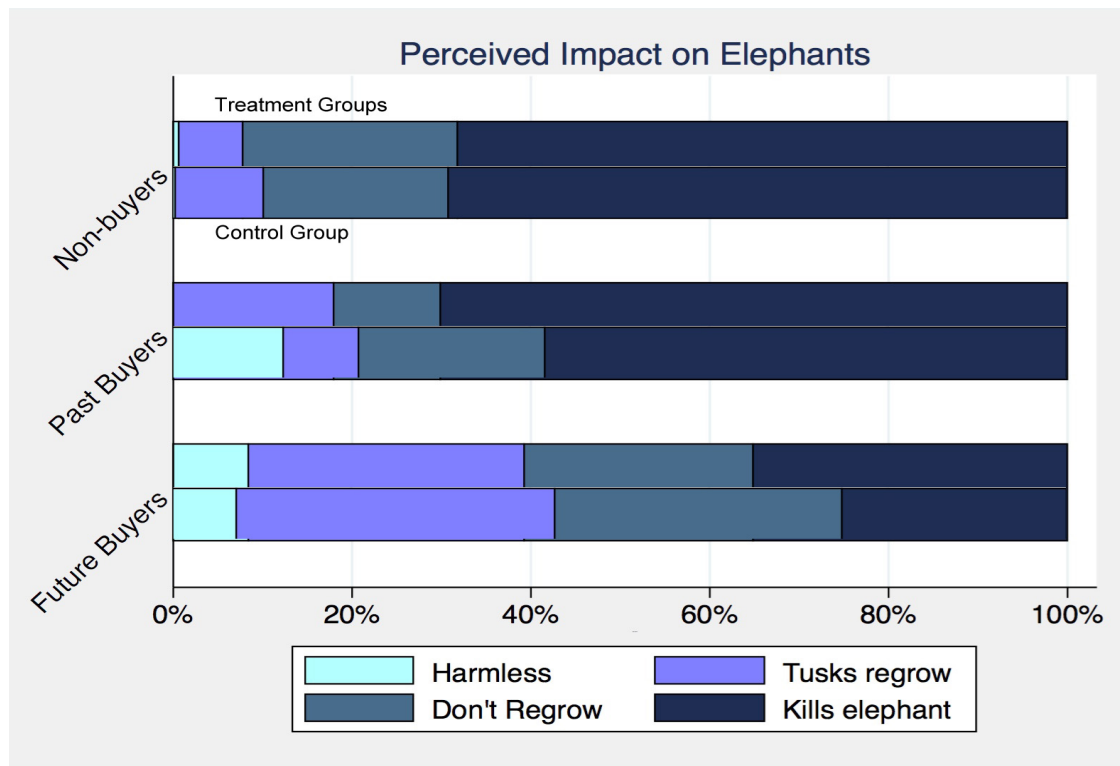
Perception of Government Role in Ivory Market



A number of other observations on respondents' understanding of ivory's legal status bear mentioning. Many fewer past and future buyers than non-buyers admitted to being unable to tell the difference between legal and illegal ivory (18.0% versus

52.5%)($\chi^2 = 141.5$, p-score = 0.000). Furthermore, past buyers and non-buyers were more likely to believe that being caught with illegal ivory would lead to prison time (60%) than future were future buyers (40%), who were more likely to believe that they would receive no punishment or at most a ‘slap on the wrist’ (25% future buyers and 6% in the non-buyer category)($\chi^2 = 83.1$, p-score = 0.000). From these results one can tentatively conclude that ivory consumption is strongly correlated with a lack of fear of punishment as well as greater confidence in being able to distinguish between legal and illegal ivory, which is impossible to do with the naked eye.

Perception of Impact of Ivory Trade on Elephants



Finally, there is also a significant relationship between buyer group and the stated perceived impact of the ivory trade on elephants ($\chi^2 = 165.0$, p-score = 0.000). The above figure shows that 68.4% of non-buyers and 66.2% of past buyers confirmed their

understanding that harvesting ivory resulted in the death of elephants, whereas only 31.8% of future buyers stated they understood this. Being exposed to a treatment message seemed to increase past and future buyers stated understanding relative to the control group that tusks don't in fact regrow and that taking them kills the elephant. Past buyers and future buyers in a treatment group were 11.7% and 15% more likely respectively than those in the control to respond that taking ivory resulted in the death of the elephant. Subjects in the 'elephant suffer group' were 7.9% more likely than those in the other two treatment groups to confirm understanding that elephants died in this process, but this difference was not statistically significant ($\chi^2 = 11.68$, p-score = 0.232). Among wealthier men in the second sample, understanding of the lethality of the ivory trade was greater, with at least 50% of all buyer groups—and 82.1% of the non-buyer group—stating that elephants die as a result of taking their tusks.

DEMAND CORRELATES & TREATMENT RESULTS

Treatment Effects on Ivory Consumption Attitudes

The binary χ^2 tests of significance were used to identify where statistically significant relationships exist between a variety of potential independent variables—the most important to our research being 'treatment'—and the dependent variable 'all buyers.'¹⁶⁰ The discovery of significant χ^2 tells us little, however, about the nature of that relationship. In order to better understand the extent of that relationship, a series of regressions were run to understand the exact numeric impact of the independent variables on 'all buyers.' Two logistic regressions were run testing two separate sets of variables. In the first, the influence of treatment group on a respondent's propensity to state he or

¹⁶⁰ A simple binary categorical variable that grouped those who planned on buying ivory in the future or confirmed having done so in the past, and those who had never in the past nor in the future plan to buy ivory ("non-buyers").

she had bought or was planning to buy ivory was tested, controlling for a number of independent variables found to be significant. The second regression tests responses to a number of attitudinal questions about the ivory trade, ivory policy, and consumer responsibility and how those shift between treatment groups and the control group.

Our independent variable of focus was ‘Treatment.’ I hypothesized that being subject to any treatment would decrease the odds of a respondent admitting to being a buyer, especially in regards to future intent. As stated before, I also thought ‘punish’ would yield more significant effects because cultural conservation norms about elephants are still weak in China, while the government’s presence in daily life is more firmly established. I also believed that receiving a treatment would have a positive effect on a respondent’s knowledge of the ivory trade, and stated support for increased measures to combat illegal trafficking. To better understand the subgroup effects of ‘treatment,’ I included a number of demographic variables I predicted had a strong relationship with buyer status based on previous research, and confirmed with χ^2 analysis. Due to the significant relationship between these demographic variables and ‘All buyers,’ including them in the regression equation also allowed me to take a conservative approach in determining the significance values of the predictor ‘treatment’ on ‘all buyers’ by holding constant any unobserved relationships between other determinants and the dependent variable.¹⁶¹

Beyond the treatment variable, I believed income to be positively correlated with buyer status, specifically that an increase in wealth would correlate with higher odds of being a past or future buyer. I hypothesized that membership in the Communist Party, because of its culture of gift giving as a means of relationship building and career

¹⁶¹ Additionally, because this experiment was conducted online rather than in a controlled environment, holding additional independent variables constant in the regression helped improve the accuracy of the results.

advancement, would also be positively correlated with ivory consumption. Education level is more complicated because as education level increases, income tends to as well, and past studies have showed a positive correlation between being more educated and being a potential buyer. On the other hand, higher education is also likely correlated with increased exposure to demand reduction campaigns and greater knowledge of wildlife trafficking in general.

In the logistic regression output, an odds ratio less than one means the independent variable decreases the odds of the dependent variable ‘future buyer’ increasing from 0 to 1 (or going from non-buyer to buyer) by a corresponding percentage. So, an odds ratio of 0.72 means that respondents within that category of the independent variable have 28% lower odds of being in the buyer group. An odds ratio of more than one means the independent variable increases the likelihood of a move from non-buyer to buyer by an equivalent percentage (i.e., an odds ratio of 1.17 means respondents within that category have 17% higher odds of being in the buyer than non-buyer group). The regressions, χ^2 tests, and tabulations were all conducted in STATA version 14. A significance value of $\alpha = 0.05$ (a less than 5% probability of the result being do to random chance) was applied to tests of significance. Any result deviating by two or more standard deviations from the mean was considered a significant result and not due to random chance. Z scores of 1.96 or higher were therefore judged to be statistically significant. Highly statistically significant results with odds ratios that did not differ greatly from zero were considered not substantively important, and therefore have a negligible practical effect on the dependent variable.

All Buyers Regression Results

All buyers	Odds Ratio	Std. Err.	z	P> z
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Treatment					
Control		(Reference group)			
Punish		.6918628	.1502563	-1.70	0.090
Elephants Suffer		.552938	.1247132	-2.63	0.009**
People Suffer		.6467621	.1410677	-2.00	0.046*
<hr/>					
Gender					
Male		(Reference group)			
Female		1.066057	.1738104	0.39	0.695
Age		.9756386	.0088428	-2.72	0.007**
Income Bracket					
<150K RMB		(Reference group)			
150K-200K RMB		1.472167	.4456738	1.28	0.201
200K-300K RMB		1.836925	.5417404	2.06	0.039*
300K-500K RMB		2.187553	.6853911	2.50	0.012*
>500K RMB		2.508917	.7555746	3.05	0.002**
Education Level					
High School		(Reference group)			
College		.8408173	.1930705	-0.76	0.450
Post-graduate		.682741	.2543212	-1.02	0.306
Party Status					
Non-member		(Reference group)			
Member		1.875706	.3333562	3.54	0.000***
Medicine					
TCM		(Reference group)			
Western		.6729426	.1128847	-2.36	0.018*
_cons		.4112793	.1950494	-1.87	0.061
<hr/>					
* Significant at 5%			** Significant at 1%		

The results of the regression confirmed a number of expectations. Most importantly, I found significant differences between how respondents in different treatment groups answered questions about personal ivory consumption. Both the ‘elephant’s suffer’ and the ‘people suffer’ treatments had a statistically significant impact on the dependent variable ‘all buyers’ relative to the control group.¹⁶³ Their odds ratio tell us that, compared to respondents in the control group, those in the ‘elephants suffer’ group and the ‘people suffer group’ were 44.7% and 35.3% less likely, respectively, to respond that they had already bought or planned to buy ivory in the future. Contrary to expectation, the ‘punish’ group was shown to have no similar statistically significant effect. This is consistent with a previous demand survey’s finding that respondents in

¹⁶³ Although men and women claim to buy ivory at almost identical rates, men were more responsive to the “elephants suffer” treatment, an effect that decreased in significance with increasing income. Women responded more to the “people suffer” treatment, regardless of income.

China expressed considerable doubt in their government's capacity to regulate the ivory trade.¹⁶⁴ It must be remembered that it is incorrect to claim, because of these treatments, intent to purchase ivory in the future has been reduced by the corresponding amounts among those respondents. We can say with some confidence, however, that those treatments induced a greater number respondents to hide their past purchases or future intent compared with the control. This implies certain types of messaging might be more effective at either reducing demand or creating an increased sense of guilt or shame than others.

When compared with the second sample of all males, we found no significant effects on 'all buyers' due to treatment. Treatment also had no significant effect on respondents of either gender in the highest two income brackets (>300,000RMB). The wealthiest respondents seem to be most resistant to messaging. Why this occurs is a question for further research. While this study can shed light on the efficacy of treatments on specific groups, it can say nothing about *why* certain treatments work or do not. It is possible that those in the wealthiest group are less affected by this messaging because they are already more exposed to it and have already formed firm opinions on the ivory trade. These more traditional moral pleas may need to be updated with newer approaches for this particular demographic group.

The regression results also showed a number of other correlations between demographic indicators and odds of being or not being an ivory consumer. As expected, we found strong statistical evidence to support the assumption that the higher a respondent's income bracket, the greater the odds of them also being in the buyer group. Those in the highest bracket, 500,000 RMB (about 73,200 USD) or greater, had 2.5 times

¹⁶⁴ National Geographic and Globescan. *Reducing Demand for Ivory*: 19.

greater odds of being in the buyer group than those who made less than 150,000 RMB (roughly 22,000 USD) a year. Interestingly, the odds of being a future buyer are 32.7% higher for respondents who preferred traditional Chinese medicine (TCM) to western medicine than those in the non-buyers group to a statistical significant degree (z-score = -2.36). Party membership was also found to be highly correlated with ‘all buyers.’¹⁶⁵ The odds of being in the future buyers group for Communist Party members, who accounted for just over 17% of the sample, were 87.6% higher than for non-Party members ($\chi^2 = 32.49$, p-score = 0.000). This correlation was confirmed in our second men-only sample study as well (odds ratio = 1.94, z-score = 2.93). Age, although statistically significant (z = -2.72), was found to have only a marginal practical influence on ‘all buyers’ (odds ratio = 0.98).¹⁶⁶ Education level, gender, and geographical region were only a few of the factors that were found to have no statistically or practically significant relationship with a respondent’s propensity to identify as a past or future buyer. While previous studies showed that buyers in China tended to be more highly educated than the population average,¹⁶⁷ higher rates of education may also be correlated with greater understanding of the negative impacts of the ivory trade and increase exposure to information campaigns; two trends that may pull in opposite directions.¹⁶⁸

¹⁶⁵ This result was further confirmed by running the regression on only respondents in the control group. The significance score for Party membership remained similarly high (z = 2.63, odds ratio = 2.35).

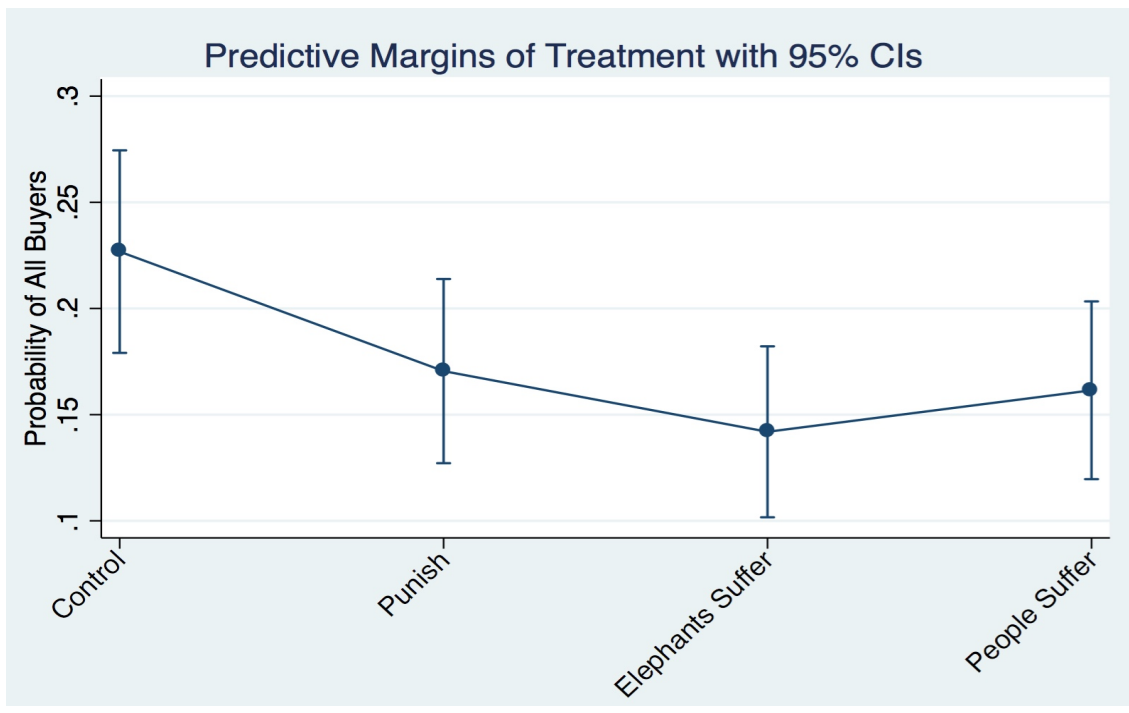
¹⁶⁶ In further regression tests, respondents 45 and older showed a statistically significant correlation between being in the buyer group and either the ‘punish’ (z-score = -1.97) or ‘people suffer’ (z-score = -2.35) treatment. For respondents 25 and under, there was no significant correlation for any treatment with being a buyer, suggesting perhaps that this type of moral messaging is less effective on a younger audience. In a separate χ^2 test, respondents 35 and under were shown to be the only group to have higher than the predicted value of future buyers, a worrying sign that potential ivory consumers skew younger ($\chi^2 = 63.3$, p-score = 0.000).

¹⁶⁷ National Geographic and Globescan. *Reducing Demand for Ivory*: 18.

¹⁶⁸ For the sake of saving space and preventing spurious variations in significance among the remaining predictor variables, many of the demographic variables that were found to be statistically and practically insignificant in both dichotomous χ^2 tests with the dependent variable ‘Allbuyers’ and in previous regressions were removed. Numerous tests for collinearity revealed no significant linear relationships between predictor variables, hence the absence of interaction terms in the regression equation.

In order to disentangle the treatments and better understand their effects relative to one another, a margins test of the categorical variable “treatment” was conducted (figure on next page). In a margins test, STATA calculates the predicted value for ‘all buyers’ at the mean value of all other independent variables based on each treatment group. In this case, for all respondents in the treatment group ‘elephants suffer,’ all things equal, they would have odds of 14.1% of also being in the ‘all buyers’ group, compared to 22.7% for the Control. This is lower than any other treatment group (‘punish’ and ‘people suffer’ have odds of 17.1% and 16.2% of being in the ‘future buyer’ group). High z-scores across the board tell us that each is margin is statistically significant from zero. The below figure shows the mean predicted probability of ‘all buyers’ for each treatment group and the corresponding 95% confidence interval.

Margins Plot of Treatment Groups



	Margin	Delta-method Std. Err.	z	P> z
Treatment				
Control	.2267805	.0243322	9.32	0.000
Punish	.1705155	.022129	7.71	0.000
Elephants Suffer	.1419276	.0205361	6.91	0.000
People Suffer	.1614788	.021356	7.56	0.000

A comparison of each treatment's margin to every other treatment's margin represents visually how much of a difference one treatment makes compared to the others on 'all buyers.' Looking at the below output, one can see the greatest difference is between the 'elephants suffer' and control groups (0.0849). This means that, compared to the control, those in the elephants suffer treatment were 8.49% less likely to say they have bought or will buy ivory, all other things equal. The difference between the 'people suffer' and control groups is 6.53%. These two comparisons are the only ones without zero in the confidence interval, and can therefore be said to be statistically significant with 95% confidence.

	Delta-method Contrast	Std. Err.	Unadjusted [95% Conf. Interval]	
Treatment				
Punish vs Control	-.05627	.03291	-.12086	.00833
Elephants Suffer vs Control	-.08485	.03182	-.14721	-.02249*
People Suffer vs Control	-.06530	.03244	-.12889	-.00171*
Elephants Suffer vs Punish	-.02859	.03029	-.08795	.03077
People Suffer vs Punish	-.00904	.03072	-.06925	.05117
People suffer vs Elephants Suffer	.01955	.02968	-.03862	.07772

The above results offer evidence for a tentative conclusion that receiving some messaging rather than none at all can indeed modify consumers' responses to questions on ivory attitudes. Assuming that the control group offers the closest approximation of an honest set of responses to the survey questions, if all that changes is the treatment, there are significant initial shifts in the way people respond to questions about buying ivory. That means, all other things equal, conservation messaging does in fact alter how people respond to questions about being a past or future buyer. The margins treatments also show that potential buyers were more likely to modify their responses if they received the

‘elephants suffer’ or ‘people suffer’ treatment rather than the “punish” treatment, which may reflect a lack of credibility in the oversight capacity of law enforcement in China or that moral messaging is more effective than initially believed. One can tentatively conclude that, of the treatments employed, evidence suggests that moral and ethical appeals were more effective than a fear of punishment in modifying responses.

In order to further explore subgroup variation by treatment, a multinomial regression model was run with ‘treatment’ as the only independent variable across different buyer groups. Other predictor variables were excluded because, due to random sub-sampling, demographic variability was evenly distributed throughout each of the treatment groups. This showed the variability of how treatment influenced a subject’s response to questions about past consumption and future intent to purchase ivory. Between buyer groups, we see significant discrepancies in the way people responded to specific treatments. Relative to our non-buyer group (which is set equal to 0 in the output below), people in the ‘people suffer’ treatment were significantly less likely to answer that they had been past buyers. Respondents in the ‘elephants suffer’ group were less likely to report being future buyers. No treatment had a statistically significant effect on respondents who had purchased in the past and planned to do so again in the future, implying that they were relatively unaffected by any treatment’s message relative to the control group.

Multinomial Regression for Treatment Groups

All buyers	Coef.	Std. Err.	z	P> z
Non-buyers	(base outcome)			
Past Buyers				
Treatment				
Control	(reference)			
Punish	-.3461281	.3123913	-1.11	0.268
Elephants Suffer	-.4681227	.3167057	-1.48	0.139
People Suffer	-.6798578	.341022	-1.99	0.046*

	_cons	-2.455636	.2043572	-12.02	0.000

Future_Buyers					
	Treatment				
	Control	(reference)			
	Punish	-.2981736	.2886292	-1.03	0.302
Elephants	Suffer	-.7290053	.3195601	-2.28	0.023*
People	Suffer	-.3709737	.2918798	-1.27	0.204
	_cons	-2.312535	.1913992	-12.08	0.000

Past and Future					
	Treatment				
	Control	(reference)			
	Punish	-.2948346	.3081505	-0.96	0.339
Elephants	Suffer	-.4681225	.3167057	-1.48	0.139
People	Suffer	-.4285435	.3168959	-1.35	0.176
	_cons	-2.455636	.2043572	-12.02	0.000

Although we see that being in a treatment group does have an influence on whether or not respondents claim to have bought or be planning to buy ivory, there is variation between buyer groups and it is difficult to make a strong substantive claim for any one particular treatment over another, or indeed that one-off messaging will have any significant effect on consumption behavior. As we see from this survey and others, support for ivory bans and pro-conservation opinions are not necessarily as closely related to ivory consumption attitudes as we might have previously thought. As our survey and others have found, better-educated respondents are not necessarily less likely to be interested in purchasing ivory. Previous studies have shown that Chinese buyers and non-buyers have similarly levels of exposure to ivory trade issues.¹⁶⁹ It is also possible that negative messaging may drive ivory consumption behavior underground rather than truly reducing it. Feelings of guilt and shame could potentially further reinforce negative behaviors.¹⁷⁰ One of the limitations of this survey is that it is impossible to establish whether responses reflect real behavior change or are simply a defensive response to a perceived moral criticism. In order to better understand the evolution of people's attitudes

¹⁶⁹ National Geographic & Globescan, *Reducing Demand for Ivory*: 19.

¹⁷⁰ Lertzman, *Reducing Desire for Ivory*, 18.

in response to different sorts of messaging, a more nuanced, qualitative approach is needed to supplement broader quantitative surveys such as this one. Additionally, negative reinforcement and moral arguments only show part of the larger psychosocial picture of demand. Future studies can employ positive messaging to see how consumers respond to other methods of satisfying the needs and desires currently filled by ivory.

Attitudes & Knowledge of Ivory within Treatment Groups

A second research question in this study focuses on how being placed in a treatment group affects stated attitudes towards ivory policy, the responsibilities of consumers and government in preventing illegal trade, and the perception of knowledge about ivory between buyers and non-buyers. In order to test this, I ran binary logistical regressions to see how receiving a certain message affected subjects' responses to a set of specific attitudinal questions. Primarily, I wanted to know whether treatment influences peoples actual and perceived knowledge of the ivory trade. Second, I felt it important to assess which demographic variables influence perceived and actual knowledge.

“Elephant knowledge” is a binary variable that divides those who answered two questions about elephants correctly into one group, and those that answered at least one incorrectly into another. Those questions were: “Worldwide, the elephant population is _____” (Answer: Declining) and “Harvesting elephant ivory _____” (Answer: Kills the elephant). ‘Identify’ is binary variable that divides respondents into two groups, those who believe they can distinguish illegal from legal ivory and those who admit to being unable. These two served as the response variables for logistic regressions. I found that the only independent variables correlated with both actual knowledge of elephants and the respondent’s misguided belief in the ability to distinguish between legal and illegal ivory were intent to purchase ivory and income. Treatment was not significantly

correlated with actual or supposed knowledge. Interestingly, both gender and age accurately predicted actual knowledge of elephants and elephant conservation. Women tended to answer more questions than men incorrectly. Age was a strong predictor of knowledge, but the odds ratio is negligible, meaning being older correlates significantly with only a one percent increase in the correct answer score.

Treatment Effect on Knowledge

Elephant knowledge	Odds Ratio	Std. Err.	z	P> z
Treatment				
Control	(reference)			
Punish	.8183544	.1479873	-1.11	0.268
Elephants Suffer	1.204319	.2194287	1.02	0.308
People Suffer	.9719456	.174752	-0.16	0.874
Gender				
Male	(reference)			
Female	.63889	.0832034	-3.44	0.001**
Age	1.014061	.0068738	2.06	0.039
Income bracket				
< 150K RMB	(reference)			
150K - 200K RMB	1.411087	.3007539	1.62	0.106
200K - 300K RMB	1.430722	.2955124	1.73	0.083
300K - 500K RMB	1.80025	.4090419	2.59	0.010**
> 500K RMB	2.042407	.4440367	3.28	0.001**
All buyers				
Non_buyers	(reference)			
Past Buyers	.8684162	.2555153	-0.48	0.632
Future Buyers	.1387494	.0308885	-8.87	0.000***
_cons	.8514651	.2390738	-0.57	0.567

Each move up in income bracket corresponds with an increase in the odds of having accurate knowledge on elephant conservation. Interestingly, however, being in the highest income bracket also correlated significantly with assuming the ability to distinguishing between legal and illegal ivory correctly (odds ratio = 2.31, $z = 3.93$). The relationship holds in just the control group as well. This implies that although wealthier subjects are more likely to be exposed to and have absorbed some form of conservation messaging in the past (or in this experiment), they are also more confident

in their preternatural ability to distinguish between legal and illegal ivory, and therefore be able to avoid breaking the law or contributing to the poaching crisis in Africa. This assumption is concerning because it could lead to the rationalization of purchasing ivory even if one is informed and agrees with a conservation policy.

Perhaps the most alarming, although not entirely unexpected, result of this test is that future buyers were significantly more likely than others to answer elephant knowledge questions incorrectly, and significantly more likely to claim to be capable of distinguishing between legal and illegal ivory (odds ratio = 6.18, $z = 4.19$). While past buyers were also likely to make this claim (odds ratio = 3.22, $z = 1.98$), there was no similar correlation with knowledge for this group. Whether intentionally or not, future buyers displayed ignorance in both circumstances. This can be understood to mean both that there is still need for conservation message with an educational aim and greater public service announcements that detail the legality of ivory. Specifically, ads can focus on illegal and legal ivory being impossible to distinguish between with the naked eye. This is especially true when dealers disguise recently poached ivory by dying the outside of the tusks to make them appear antique. The upcoming domestic ban alone is likely not enough to discourage all ivory consumption especially if doubt or lack of knowledge are used as rationalizations for illegal behavior. A strong push to educate the public that it will soon be illegal to purchase any ivory is necessary to remove all doubt.

Finally, a score was generated to represent a subject's attitude towards greater or lesser regulations in the domestic ivory market. The lower the score, the less favorably a subject viewed government control and the less responsibility they felt consumers should take in preventing the illegal traffic in ivory. Treatment had no significant effect on how subjects viewed greater or lesser control and responsibility by either party ($\chi^2 = 18.65$, p -score = 0.230). A subject's buyer group, however, was significantly correlated ($\chi^2 =$

316.12, p-score = 0.000). Compared to the overall sample, future buyers disproportionately viewed greater government and consumer responsibility negatively and were generally in favor of decreased regulations and controls.

Treatment Effects on Political Action

Equally important to this research was forming a better understanding of the likelihood of respondents in different treatment groups taking political action in support of reducing ivory consumption. We also sought a better understanding of how demographics, consumption habits, and attitudes towards ivory affect statements of intent regarding political and social behavior. The following questions were asked of all respondents in all treatment groups:

- How likely is it that you would sign a petition in support of efforts to ban the ivory trade?
- How likely is it that you would write a letter, e-mail, or phone your local government to ban the ivory trade?
- How likely is it that you would write a letter or e-mail your local paper to support a ban on the ivory trade?
- How likely is it that you would talk to your friends and family to support a ban on the ivory trade?
- How likely is it that you would donate money to an organization in support of banning the ivory trade?
- How likely is that you would join a group in support of banning the ivory trade?

Respondents answered on a four-point scale: “not at all likely,” “not very likely,” “somewhat likely,” and “very likely.” The final question asked if they would sign a pledge to never again buy ivory products and enter their name in the blank provided. This was meant as a test of commitment with a somewhat higher potential cost to respondents than simply stating they would be likely to take action. 90.3% of all respondents agreed to sign and then entered their names, including 87.7% of respondents who previously stated they had bought ivory in the past *and* were planning on buying ivory in the future. 96% of respondents who stated having purchased ivory in the past but were not planning to buy in the future signed the pledge. A Pearson’s χ^2 test showed there was not quite a

significant relationship between a respondent signing the pledge and his or her being a buyer or non-buyer of ivory ($\chi^2 = 5.13$ p-score = 0.077).¹⁷¹ The fact that such a high percentage of respondents who stated they planned to buy ivory in the future also signed the pledge not to buy ivory in the future suggests there is little relationship between the action of taking the pledge and future intentions. The only demographic variable that proved statistically significant in the regression variable ‘pledge signature’ was gender ($z = 2.01$). Results show that the odds of a woman signing the pledge were 55% higher than for men, all other things equal. In the men-only survey, 84.5% of all respondents signed the petition. Treatment had no statistically significant effect on whether or not a subject decided to sign the petition in this sample either ($\chi^2 = 3.84$ p-score = 0.280).¹⁷²

Political Action Regression Results

Political Action	Coef.	Std. Err.	t	P> t
All buyers				
Non-buyers	(Reference group)			
Past Buyers	.3069181	.0882236	3.48	0.001**
Future Buyers	-.2075155	.0637775	-3.25	0.001**
Treatment				
Control	(Reference group)			
Punish	.0462982	.0523958	0.88	0.377
Elephants Suffer	-.0253554	.0522623	-0.49	0.628
People Suffer	.0322783	.0522501	0.62	0.537
Party Status				
Non-member	(Reference group)			
Member	.0793443	.0448276	1.77	0.077
Income_bracket4				
150K-200K RMB	.1050714	.0634268	1.66	0.098
200K-300K RMB	.1233004	.0616216	2.00	0.046*
300K-500K RMB	.1999231	.0668248	2.99	0.003**
>500K RMB	.0697011	.063457	1.10	0.272

¹⁷¹ In a separate test, the past buyer group was very close to statistical significance ($z = 1.87$). With an odds ratio of 3.88, this is a sign of a potentially important practical relationship between stating you only bought ivory in the past and deciding to sign the petition. Past buyers have odds almost four times higher than non-buyers and almost five times higher than future buyers of signing the petition. Due, however, to a small sample size (only 2 of 71 past buyers were non-signatories), it is impossible to establish a definitive relationship here.

¹⁷² Although the z-scores for the logistic regression were not quite statistically significant between treatment and signature, the odds ratios show that receiving some treatment rather than none led to an increase in the likelihood of a signature (Punish = 1.50, Elephants Suffer = 1.56, People Suffer = 1.35).

Age		- .0044115	.0019802	-2.23	0.026*
Gender					
	Male	(Reference group)			
	Female	.0643637	.0380399	1.69	0.091
Elephant Knowledge		-.0103984	.0406047	-0.26	0.798
Punishment		.1874685	.0389409	4.81	0.000**
Consumer Role					
	None, buy and sell OK	(Reference group)			
Buy only certified legal		.3274924	.0964485	3.40	0.001**
Stop buying		.4290864	.0978893	4.38	0.000**
Government Role					
	Allow import, sale	(Reference group)			
Stop import, allow sale		.1461431	.1122607	1.30	0.193
Punish ill., allow own.		.0606356	.0991599	0.61	0.541
Confiscate and destroy		.2589651	.1000277	2.59	0.010*
	_cons	2.639075	.1396036	18.90	0.000

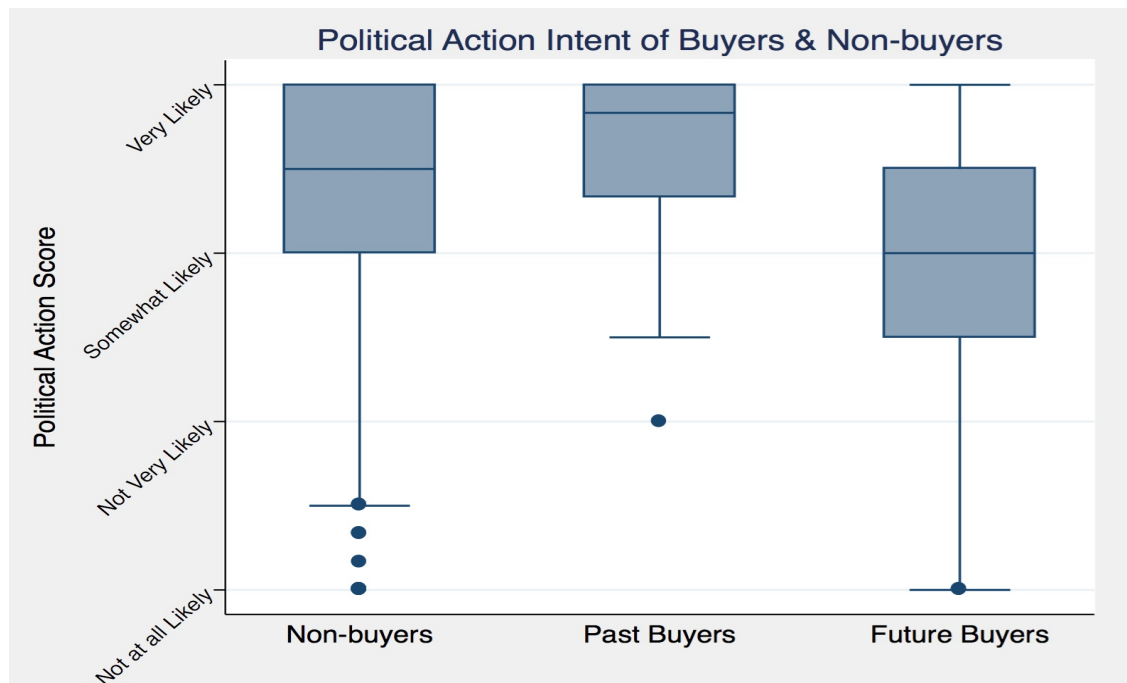
* significant at 5% ** significant at 1%

The answers for the six political action questions, weighted on the four-point scale, were averaged together to generate a political action score for each respondent of between zero and four. The data for this score was not normally distributed and very right-skewed (favoring taking action over not), but this was determined not to be problematic because of a very large sample size of over 1,300. Two-variable chi² tabulations were performed to first find the predictor variables most closely associated with the political action score. Then, a numeric regression was conducted to assess which of those predictors, when controlling for all others, were most closely related to an increased or decreased likelihood of a respondent taking political action. As with the prior regression analyses, particular focus was paid to the treatment variables to see how they might influence political action (see above regression output).

The results of the regression show treatment does not play a significant role in predicting political action. In fact, very few of the predictor variables that were found to be significant in the future buyer regression were found to be significant here. The treatments' coefficients are also low, implying that even with a statistically significant result, the treatment would account for a relatively small percentage of the political action

score. Income, however, was found to be significant. Moving from the second bracket to the third and the third to the fourth resulted in statistically significant 0.12 and 0.20 increase in political action score. Although this is substantively minor increase, it does suggest that those with higher income might be more likely to take action. Age was also found to be significant, although with a very small practical effect. An increase in age is correlated with only a slight dip in the political action score. Believing in harsh criminal punishment for purchasing illegal ivory was also correlated with higher political action scores, as was support for greater consumer and government responsibility in addressing the illegal ivory trade.

Political Action Scores for Ivory Consumers



The most interesting result came from the “All Buyers” category in which respondents were divided into “non-buyers,” “past buyers,” and “future buyers.” Being a future buyer had a highly significant negative effect on the political action score. A

coefficient of -0.21 implies that moving from the non-buyer to the future buyer category would decrease political action score by a corresponding amount. Those who had purchased ivory in the past but were not planning to again in the future had a statistically significant and positive coefficient of 0.31, meaning that moving from the non-buyer to the past buyer category corresponds to a 0.31 point increase in the political action score. The figure above shows this in graphical form with the median political action score and the confidence interval for each category of buyer. We see that past buyers are the most concentrated category, meaning a larger percentage of past buyers clustered around that higher median political action score. One can infer that respondents claiming to be past buyers are significantly more likely even than non-buyers to claim they will take political action.

DISCUSSION

Practical Implications of Results

From the results of the above tabulations and regression analyses, a number of and tentative conclusions can be drawn that may be useful in modifying the messaging and scope of future demand reduction campaigns and enforcement efforts in China. It must be remembered, however, that these are the results of an exploratory survey and analysis using two samples that are not representative of the wider Chinese population. Any results herein must be taken as a speculative first pass meant to highlight areas for potential further research, not hard and fast conclusions about Chinese ivory consumption behaviors. The most immediately evident observation, as with all surveys of its kind, is the difficulty of understanding the complex nature of demand and consumption attitudes. An experimental survey such as this one helps to shed light on some questions but simultaneously raises a host of others. To what extent can we assume a modification in

response to specific treatment is a sign of true behavioral change rather than a dishonest answer due to feelings of guilt or shame? Furthermore, how might these psychological responses be useful or counterproductive to our long-term goal of reducing demand for ivory? To what extent can we really disentangle pre-existing opinions and biases from the influence of treatments? Though these survey results do not offer many definitive conclusions, they can help to refocus information campaigns on more targeted audiences with better tailored messaging. Understanding a respondent's initial emotional response to a particular message is an important first step in addressing behavior through information campaigns. The following preliminary conclusions and recommendations are derived from the preceding experimental results.

First, perceived availability of ivory and differences in the understanding of its legal status had a large impact on a respondent's stated ivory purchase history and intent. 76.5% of non-buyers viewed obtaining ivory in their areas as "very difficult" or "impossible," while only 38% of buyers felt this way ($p\text{-score} = 0.000$). Taken along with the fact that 26.7% of non-buyers cited price as the main reason not to buy ivory ($p\text{-score} = 0.001$), it is important to consider how much high prices and inaccessibility influences demand for current non-consumers. There is likely a 'dormant' demand group that does not refrain from buying ivory by choice, but instead does so for financial and access reasons. The closure of the legal market that is underway has already significantly depressed prices domestically in China. It is possible that while access will be increasingly restricted, lower prices might encourage consumption among a section of the population that previously was not part of the ivory market. When designing enforcement policies and further demand reduction campaigns, policymakers must be aware of the negative aspects of falling prices and the potential for new, socio-economically diverse groups becoming active wildlife consumers.

A further concern is that many fewer ivory consumers fear criminal punishment than do non-buyers. This can mean one of two things. Either criminal enforcement is insufficient to dissuade a substantial percentage of the consumer group from buying, or that this group is particularly resistant to threats of enforcement and must be targeted through other methods. The former is supported by previous survey results that showed 45% of respondents felt laws in China are poorly enforced.¹⁷³ Either way, falling ivory prices in the Chinese domestic market are not necessarily a permanent trend and should not be understood to be a reflection of falling demand across all potential consumer groups. In our multinomial regression results, it was observed that the ‘people suffer’ treatment had a more significant effect on the past buyers group, and the ‘elephant suffer’ treatment was more likely to reduce claims of future intent to buy. Although it is difficult to claim definitively why this happened, it shows that those treatments effective responses differently, either by presenting knowledge that was previously known or by inspiring greater feelings of guilt and shame in past and future buyers. Further research is needed to better understand these effects.

Another important result of this survey is that accurate knowledge of elephant population trends and the impacts of poaching are strongly correlated with decreased stated demand for ivory, but inaccurate knowledge can work in the opposite direction. Contrasting previous studies that show that knowledge of the status and threats to elephants are similar among likely buyers and non-buyers,¹⁷⁴ this study finds that, non-buyers stated they understood that harvesting ivory killed elephants at more than twice the rate that past and future buyers did (69.6% versus 30.1% in the control group). 9.6% of buyers said it was harmless and 30.1% said that the tusks regrow. Although this is not

¹⁷³ National Geographic, *Reducing Demand for Ivory*, 19.

¹⁷⁴ National Geographic & Globescan. *Reducing Demand for Ivory*: 7.

hard proof that there is a disparity of knowledge between buyers and non-buyers, it does suggest that buyers are more willing to rationalize that their consumption of ivory doesn't seriously affect elephants, in spite of what they already may know about poaching and the ivory trade. Furthermore, results showed that people who responded accurately that elephant populations were in decline also had much higher odds of being in the non-buyer category. However, false assumptions that some consumers had about being able to distinguish legal from illegal ivory by its appearance, which can be easily altered to resemble antique ivory, or from legal certificates, which are often forged or reused, was strongly correlated with the being a buyer. Campaigns that focus on the legal liability of purchasing ivory and vendors' unscrupulous trade practices could be an effective way of targeting potential buyers who are unaware or claim ignorance of the legal risks they incur when buying ivory online or at retail outlets.

This research has also served to shed some light on new demographic correlates of demand for ivory in China, two of the most significant being membership in the Communist Party and a preference for Traditional Chinese Medicine (TCM) over Western medicine. Both of these independent variables were shown to have a strong positive relationship with ivory consumption to highly statistically and practically significant degrees. The first of these correlates, Party membership, which was a highly significantly related to ivory consumption in both the mass sample and the men-only sample, is a particularly complicated issue. First, it suggests President Xi's focus on weeding out corruption and cracking down on lavish consumption within the Party is indeed well founded. The culture of gift giving within the Party remains strong, and luxury products like ivory will only become more valuable status symbols with increasing scarcity. Perhaps greater intra-governmental focus is needed to spread the stigma of ivory consumption among officials and reduce bribery and luxury gift giving of

all kinds. This can be achieved through greater political transparency and a stronger mandate for the Central Commission for Discipline and Inspection, the agency charged with policing government officials. It is also essential that journalists and private citizens continue to publicize incidents of official malfeasance, particularly as it pertains to illegal wildlife consumption, in order to put greater pressure on government bodies to enforce their internal policies.

The second major determinant, preference for TCM, is no less complicated or difficult to address. Deep-rooted cultural and historical factors have made attitudes towards TCM particularly resilient. Furthermore, an active propaganda campaign by the government to bolster the cultural status of TCM within China is sending mixed messages to the general population about consumption versus conservation. It is possible that the use of TCM, which relies heavily on ingredients derived from wild animals and plants, can help people rationalize the consumption of other wildlife products—such as ivory—that have essentially no alleged medicinal purposes. The survey results suggest this may be the case, as respondents with a preference for TCM over Western medicine were 33% more likely to be in the buyer category. The government could consider distancing itself from active promotion of TCM, or alternatively, design promotional propaganda campaigns around traditional medicinal therapies that are free of wildlife products.

Unlike previous surveys, this study did not show as strong a relationship between other predictors such as education and the dependent variable, “All buyers.” Additionally, some observed correlations between the dependent variable and the predictor “treatment” varied greatly between subgroups of the sample. Age was one such modifier which, when divided into subgroups, resulted in highly different levels of significance for the treatment variable on “All buyers.” From these initial results, it is difficult to say what the

drop-off in efficacy for treatments among respondents under 25 is due to. Expanding the scope of the experiment to include messaging that speaks more to younger generations' experiences and desires may be a potential solution. Furthermore, respondents 35 and under were more likely to than the rest to be in the "future buyer" group, reinforcing previous research claiming that prospective buyers are indeed younger. Finding appropriate messaging that targets younger consumers is essential for long-term demand reduction campaigns.

Consistent with previous statistical and qualitative studies, higher incomes prove to be one of the major drivers of demand for elephant ivory in China and one of the most problematic. Not only were the wealthiest respondents more than 2.5 times more likely to be in the buyer group than were respondents in the lowest income bracket, they were also the least responsive to the experimental treatments. Why this is remains an open question. It is possible respondents with higher incomes, who also tended to be older and more educated (92% had at least a college degree), have already been exposed to a greater number of similar conservation campaigns in the past and have already formed their opinions of this type of messaging and therefore are less likely to be swayed by it. Higher income respondents were also somewhat more likely to answer questions on elephant population trends and poaching accurately than the other groups. Those who claimed an income of over 300,000RMB a month were more than 10% more likely to answer all the questions correctly than were respondents who made less than 200,000RMB per month. ($\chi^2 = 9.14$, p-score = 0.01). Exposure and education, in this instance, may be working to temper the effects of this one-off messaging experiment. Again, a wider range of treatments, targeting the positive perceived aspects of ivory, rather than just its negative environmental and social impacts, may prove to be a better approach to influencing this group of consumers. Further research is needed.

Future campaigns should target younger, wealthier potential consumers.

Results of the political action regression study suggest that, although treatments had little perceivable effect, people from certain demographic groups are more likely to take political action on elephant conservation. Specifically, future information campaigns should look to target younger, wealthier potential consumers. Women were also shown to be more likely than men to sign the pledge not to buy ivory and may, therefore, be more likely to take political action on public campaigns. Additionally, past buyers with no stated intention of buying ivory in the future are a more politically mobilized group for messaging a larger audience. They were more likely to have greater moral objections to the ivory trade than other groups, and were even more likely than non-buyers to state they would take political action against ivory trafficking. As past consumers, they were also shown to have a better understanding of the legal and regulatory aspects of the trade and may have greater familiarity with more subtle psychological aspects of desire for ivory. For this reason they may be ideal recruits to serve as opinion leaders and mobilizers.

Past buyers can be mobilized to spread conservation messaging.

The second aspect of political action, the signing of the pledge, provided less conclusive results. A vast majority of each buyer group agreed to and signed the pledge, implying that among many potential ivory consumers, there exist a rationalization gap between individual consumption behavior and political action. It is possible that, as was concluded in the National Geographic survey, consumers do not perceive the impact of their consumption on global conservation efforts, and therefore make conflicting statements.¹⁷⁵ Some respondents are capable of simultaneously supporting greater restrictions on the ivory trade while still intending to purchase ivory products in the

¹⁷⁵ National Geographic. *Reducing Demand for Ivory*, 3

future. They may even make empty pledges to abstain from purchasing ivory products as long as it imposes little cost on them personally. Both this survey and the National Geographic and Globe Scan survey showed similarly high levels of support for enhanced restrictions on the sale ivory between buyers and non-buyers, with as many as 67% of buyers saying they would support the total ban in the latter and 58% of future buyers supporting complete market closure in the former.¹⁷⁶ On the other hand, it is possible that prospective ivory buyers perceived little cost in taking an empty action and signing the petition. It may have even helped to assuage feelings of guilt or shame caused by a greater understanding of the negative impacts of the ivory ban.

Continued Public Education is Essential to Changing Norms on Ivory

The results of the treatment regressions and margins tests showed that those subjected to some form of conservation messaging were more likely to modify their responses to questions than those who received none. In particular, those who received the elephants suffer treatment then responded that they had purchased or were interested in purchasing ivory in the future at a rate of only 14.19% compared to 22.69% in the control group (a relative change of 37.46%). This could mean either that a significant percentage of respondents felt guilt and shame and therefore decided to answer untruthfully, or that a certain number of respondents even considered modifying future behavior in response to new knowledge of the impacts of the ivory trade. From these statistical results it is impossible to conclude which of these occurred. Furthermore, this research showed strong statistically and substantively significant correlations between possessing accurate information on the ivory trade and stronger support for conservation policy and a decrease in the odds of a respondent admitting to being a buyer. Again,

¹⁷⁶ Ibid., 19.

although this is not proof of decreased consumption behavior, it does show that those with greater exposure and knowledge are more likely to have internalized certain conservation norms and are, at the very least, less willing to admit to consuming ivory.

Regardless of whether treatment truly modifies behavior, these results are significant because they show that even one-off exposure to conservation messages can modify responses to questions about consumption habits. The hope is that repeated exposure to certain types of messaging can lead to norm changes and, over time, potentially modify behavior as well. Demand reduction is a slow process. Even in the U.S. and Europe it took decades for ivory to fall out of favor with the majority of the population. Raising awareness of the impact of the ivory trade is only the first step in changing behavior. Demand is ‘sticky’ and desire is notoriously hard to pin down. Regular exposure to certain messaging is necessary to embed accurate knowledge and new norms that weren’t previously widespread amongst Chinese wildlife consumers. Which form of messaging is the most effective is still open to debate, but this experiment shows that some Chinese consumers are more responsive to messaging focused on the suffering of elephants and people rather than the risks of punishment. Further qualitative research in the form of in-depth interviews, focus group discussions, and interviews will be needed to better understand the actual behavior modifying capabilities of different awareness campaigns.

Survey Drawbacks & Areas for Further Analysis

These survey results are a first pass at understanding how segments of the Chinese population react to certain forms of conservation messaging. Alone, they provide few definitive conclusions as to which messaging is most effective and how to modify ivory consumption behavior through awareness campaigns. They do, however, help to

narrow the search by singling out specific correlates of ivory demand and providing initial statistical results on how certain types of consumers react to the negative impacts of the global trade in ivory. What are needed now are both repeat studies to help confirm the results presented above and follow-on studies that capture the specific psychological and cultural aspects of demand through in-depth interviews and focus group studies with ivory consumers.

The first notable drawback of this study is that the sample was not representative of the wider Chinese population. It was a sample of convenience in which respondents volunteered to answer the survey in exchange for payment. For this reason, it was biased towards wealthier and more educated urban residents. Sample average incomes and education levels did not accurately reflect countrywide trends. Time and finances permitting, a larger sample collected through a variety of online, telephone, and in-person interview methods would help dilute this bias and allow surveyors to cover segments of the population left out by a strictly online survey.

The selection of treatments was also a limiting factor in this study. Partly to reflect current conservation campaigns, and partly to limit conflicting messaging between treatment groups that would make comparison difficult, the three treatments focused on specific negative impacts of the trade. In future studies, rather than negative reinforcement, researchers could focus on the perceived positive aspects of ivory. In an attempt to understand motivations behind purchasing ivory, messages could be tailored to highlight how ivory increases a consumer's sense of self worth or solidarity with a larger social group. The news story treatments could describe ivory's cultural and historical significance in China, its importance as a social currency, or its potential spiritual benefits. Responses would then be analyzed to see which positive messaging increased or decreased a respondent's odds of being in the buyer group and their opinions of ivory

products generally. From these results, researchers might better understand the perceived benefits of ivory and other means of filling those desires.

Although the treatments were effective at testing how responses are modified, there is no way to conclude how they may have impacted actual future behavior. Although many precautions were taken to prevent respondents from becoming aware of the conservation focus of the survey, a certain amount of framing bias within the subject matter of the questions inevitably persists. It was therefore impossible to ensure that all respondents answered truthfully. A possible solution to this is a greater focus on in-depth, qualitative research. Because of the complexity of demand and desire, the human-to-human element is essential. Establishing a sense of mutual trust and understanding between researcher and subject can help to alleviate many of the barriers to responding honestly that are caused by feelings of guilt and shame often associated with ivory consumption.¹⁷⁷ Well-designed focus groups and one-on-one interviews may help to alleviate some of those social pressures by establishing an atmosphere of respect and understanding. Although this would limit the reach of the study, it could give nuance to results obtained from mass surveys like this one. Well-trained researchers adept at decoding and interpreting ulterior meanings in responses can also discover far more about how desire for ivory allows certain respondents to rationalize conflicting behaviors and values.¹⁷⁸ Broad-based, quantitative data should be supplemented with these more detailed and personal approaches if something as complex as demand for ivory is to be better understood.

¹⁷⁷ Lertzman, *Reducing Desire for Ivory*, 26.

¹⁷⁸ *Ibid.*

Conclusions

This report sheds light on the disconnect between Chinese consumers and a deep understanding of their environmental impact, a problem that allows for the rationalization of unsustainable behavior. The long-term goal of environmental education in China is to build a bridge between consumers and their environment and spread the seed of conservationism throughout the Chinese middle class. In a remote corner of southwest China's Yunnan province, a small population of fewer than 250 Asian elephants has survived to this day in the tropical forest that hugs the Burmese border, but is increasingly threatened by habitat fragmentation. China's population, now more than 50% urban, is similarly cut-off from the natural world around them that is being pushed to the brink of collapse to support the economic needs of 1.4 billion people and counting. In order to increase ecological education and spread conservation awareness, it is imperative to re-establish a strong connection between Chinese young urban population and nature. Just as the giant panda became the emblem of state-led conservation in China, the last remaining Chinese elephants can be that bridge between the Chinese consumer and the poaching crisis in Africa. It is important that the message be personalized—or Sinicized—and delivered by trusted local opinion leaders, in order to give young Chinese consumers a stronger stake in conservation efforts. Demand reduction and behavioral shift begin at the earliest stages with education. From an early age, public schools should focus on ecological education and school children should become acquainted with their own natural community through field trips and a more conservation-oriented science curriculum. Only in this way can desire for a product like ivory, with its deep-rooted cultural and social significance, be reduced and eventually eliminated.

China must also come to terms with and address its deepening international footprint, both at the individual and public levels. The Chinese government has begun

collaborating with its neighbors on cross-border anti-trafficking operations and has made financial contributions to support conservation efforts in Africa, but more is needed to offset its huge environmental impact and educate its citizens. Specifically, the Chinese government could do more to reach out to and rein in the behavior of the employees at its state-owned enterprises in Africa and elsewhere. Criminal networks that traffic ivory transnationally often rely on embedded Chinese communities in Africa to source ivory from local poachers. There is also substantial evidence to support that ivory trafficking to Asia often follows in the wake of Chinese corporate expansion onto the continent.¹⁷⁹ Chinese nationals have been linked to ivory trafficking crimes in almost two-thirds of African elephant range states.¹⁸⁰ More must be done to educate and warn overseas Chinese about these crimes, and state-owned companies must exercise greater oversight over their employees to crack down on this behavior.

While the efficacy of China's domestic ivory ban remains to be seen, the government should waste no time exporting the ban to its neighbors in Asia and ensuring its own citizens do not travel abroad with the purpose of circumventing the ban. It is a significant achievement and should be an important diplomatic tool in its relations with ASEAN and other international communities. A growing concern amongst conservationists today is where all of China's excess demand and Africa's excess supply will go when the Chinese market is officially closed at the end of 2017. Leaky stockpiles currently in the hands of collectors and national governments are a significant problem. Less regulated markets along the China's border such as Hong Kong, Laos, Myanmar, and Vietnam, which lack enforcement capacity and still allow the sale of ivory

¹⁷⁹ Bates Gill & James Reilly, "The Tenuous Hold of China Inc. in Africa," *The Washington Quarterly*, Volume 30, Number 3 (2007): pp. 37-52.

¹⁸⁰ Joseph Vadegrift, "Elephant Poaching: CITES Failure to Combat the Growth in Chinese Demand for Ivory," *Virginia Environmental Law Journal*, Vol. 31, 102: pp. 102 – 135.

domestically are already common source countries for ivory coming into China illegally.¹⁸¹ With the ban in place, this problem is likely to worsen. Singapore and Hong Kong are considering or are already in the initial stages of implementing ivory bans themselves.¹⁸² The Chinese government could do more to encourage others to adopt similar plans, especially those with which it shares strong cultural or political ties. Specifically, China should exercise its outsized influence over Hong Kong to urge implementation of its ban in advance of the proposed 2021 date to avoid a spike in demand fueled by mainland tourists. China could also encourage its neighbors to increase the punitive measures available for punishing traffickers¹⁸³ and, together with NGO specialists, provide greater law enforcement training and support to countries struggling to control their under-regulated markets.

This study builds off of the work of previous researchers and NGOs and represents only a small additional step towards a better understanding of the drivers of demand for ivory in China. It is imperative that the NGO community diligently watches the rollout of the Chinese domestic ivory ban, not only to ensure effective implementation, but also to better understand how prices are affected and demand for ivory changes over time. In July of this year, the largest single ivory seizure in three

¹⁸¹ Vincent Nijman & Chris R. Shepherd, “Emergence of Mong La on the Myanmar–China Border as a Global Hub for the International Trade in Ivory and Elephant Parts,” *Biological Conservation* 179 (November 2014): pp. 17–22.

TRAFFIC, “Wildlife Trade News - New Study Finds Rhino Horn Openly for Sale in Notorious Myanmar Wildlife Markets,” 30 March 2017, <http://www.traffic.org/home/2017/3/31/new-study-finds-rhino-horn-openly-for-sale-in-notorious-myan.html>.

¹⁸² Pearl Lee, “Parliament: Singapore May Ban Domestic Sale of Ivory, Politics News & Top Stories,” *The Straits Times*, 1 March 2017, <http://www.straitstimes.com/singapore/parliament-singapore-may-ban-domestic-sale-of-ivory>.

Larsson, “Hong Kong Launches Bill to Ban Domestic Ivory Trade.”

¹⁸³ Already, the Indonesian government is contemplating using money laundering laws to punish wildlife traffickers: “Illegal Wildlife Trade Perpetrators Can Be Prosecuted with Money Laundering,” *Netralnews.com*, 7 March 2017, <http://www.en.netralnews.com/news/currentnews/read/2309/illegal-wildlife.trade.perpetrators.can.be.prosecuted.with.money.laundering>.

decades was confiscated in Hong Kong—almost eight tons of ivory—in transit from Malaysia.¹⁸⁴ Only three days later, three more tons were reported seized in Vietnam.¹⁸⁵ Whether this is evidence of criminal syndicates rushing to off-load stockpiles before ivory bans take effect, or more worryingly, that the dip in price is not in fact due to slump in demand but rather a glut in supply, it is clear that little has yet been accomplished and demand reduction efforts must be redoubled. My hope is that the insights offered here will inspire more comprehensive and detailed pursuits and help to inform and guide future policies and awareness campaigns to reduce ivory demand globally.

¹⁸⁴ Joshua Berlinger, “Hong Kong Seizes Largest Ivory Haul in 30 Years,” *CNN*, 6 July 2017, <http://www.cnn.com/2017/07/06/asia/hong-kong-ivory-seizure/index.html>.

¹⁸⁵ “Three Tonnes of Ivory Seized in Vietnam,” *Phys.org*, 9 July 2017, https://phys.org/news/2017-07-tonnes-ivory-seized-vietnam_1.html.

Appendix

Treatment 1: 'Punish'

中国加强了对非法进口象牙雕刻的惩罚力度

China Increases Punishment for Illegal Ivory Carving Imports

14年2月27日



中国海关人员在北京国际机场截获了大量的象牙制品进口。图片来源：: ALEX HOFFORD/EPA

Chinese customs officials interdict large shipment of ivory imports at the Beijing international airport. Photograph: ALEX HOFFORD/EPA

北京-

中国在减少象牙贸易方面受到了越来越大的国际压力。中国最近实施了临时禁止进口象牙制品一年的规定。政府人员希望该政策能够减少对象牙制品的需求。政府也警告人们禁止从非洲带入任何象牙及其制品。在过去几年里，有超过7万人因与象牙有关的违法行为而被定罪。例如：八个来自中国安徽省的居民因为在2010年至2012年间走私了3.2吨的象牙而被判处有期徒刑3至15年不等。

BEIJING – There is mounting international pressure to reduce China's role in the ivory trade. China recently imposed a one-year moratorium on the import of ivory carvings.

Officials hope the policy will reduce demand for ivory products. The government has also warned its citizens not to bring back any ivory from Africa. More than 700 hundred people have been convicted for ivory-related crimes in recent years. For example, eight Chinese citizens were convicted and sentenced to 3 to 15 years imprisonment in east China's Anhui Province for smuggling a total of 3.2 tonnes of ivory between 2010 and 2012.

Treatment 2: ‘Elephants Suffer’

中国对象牙的需求导致了大象数量的下降

Chinese demand for ivory leading to decline in elephants

2014年2月27日



对象牙的需求，尤其是来自中国的需求，导致了三年内死亡了10万只非洲大象。照片来源：ALEX HOFFORD/EPA

Demand for ivory, particularly from China, led to the deaths of 100,000 African elephants in three years.
Photograph: ALEX HOFFORD/EPA

北京-中国在减少象牙贸易方面受到了越来越大的国际压力。“拯救大象” (Save The Elephant) 创始人Iain Douglas-Hamilton

说，根据他们的研究，2010年到2012年的三年间，非洲就有10万头大象因为象牙被猎杀。中国成为了大象未来的关键因素，如果没有中国在结束对于象牙需求方面的领导作用，非洲大象将很有可能在我们这一代从野外绝迹。

BEIJING –There is mounting international pressure to reduce China’s role in the ivory trade. Iain Douglas-Hamilton, founder of Save the Elephants, said “one hundred thousand elephants were killed for their ivory in Africa in just three years between 2010 and 2012 according to our research. China holds the key to the future of elephants – without China’s leadership in ending demand for ivory Africa’s elephants could disappear from the wild within a generation.”

Treatment 3: ‘People Suffer’

中国对于象牙的需求导致了非洲的暴力

Chinese demand for ivory leading to violence in Africa

2014年2月27日



反对非法狩猎的特种兵和刚果士兵在瓜兰巴国家公园巡逻。照片来源：Tyler Hicks/NYTIMES

Anti-poaching rangers and Congolese soldiers patrolling Garamba National Park. Photograph: Tyler Hicks/NYTIMES

北京-

中国在减少象牙贸易方面受到了越来越大的国际压力。在乌干达，圣主抵抗军

（Lord's Resistance Army）成员和其他的非洲暴力反政府组织正在使用偷猎的大象的象牙进行贸易，交换大量的枪，物资和现金。通过向中国、泰国等地非法出售象牙而获得的这些资金和武器，已经被证实为支持非洲撒哈拉以南地区的很多反政府组织的一个重要来源。

BEIJING –There is mounting international pressure to reduce China's role in the ivory trade. In Uganda, members of the Lord's Resistance Army and other violent rebel groups in Africa are using ivory from poached elephants to trade for guns, supplies, and cash. The funds and weapons raised from the illegal sale of ivory to China, Thailand, and other countries have proven to be one important mechanism supporting many rebel groups in Sub-Saharan Africa.

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